LG

DR-7400

MODEL

SERVICE MANUAL

CONTENTS

SECTION 1

SUMMARY

CONTENTS

PRODUCT SAFETY SERVICING GUIDELINES FOR VIDEO PRODUCTS

IMPORTANT SAFETY NOTICE

This manual was prepared for use only by properly trained audio-video service technicians.

When servicing this product, under no circumstances should the original design be modified or altered without permission from LG Electronics Corporation. All components should be replaced only with types identical to those in the original circuit and their physical location, wiring and lead dress must conform to original layout upon completion of repairs.

Special components are also used to prevent x-radiation, shock and fire hazard. These components are indicated by the letter “x” included in their component designators and are required to maintain safe performance. No deviations are allowed without prior approval by LG Electronics Corporation.

Circuit diagrams may occasionally differ from the actual circuit used. This way, implementation of the latest safety and performance improvement changes into the set is not delayed until the new service literature is printed.

CAUTION: Do not attempt to modify this product in any way. Never perform customized installations without manufacturer’s approval. Unauthorized modifications will not only void the warranty, but may lead to property damage or user injury.

Service work should be performed only after you are thoroughly familiar with these safety checks and servicing guidelines.

GRAPHIC SYMBOLS

The exclamation point within an equilateral triangle is intended to alert the service personnel to important safety information in the service literature.

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the service personnel to the presence of noninsulated “dangerous voltage” that may be of sufficient magnitude to constitute a risk of electric shock.

The pictorial representation of a fuse and its rating within an equilateral triangle is intended to convey to the service personnel the following fuse replacement caution notice:

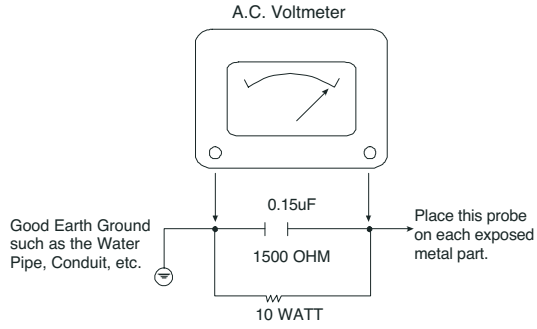
CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ALL FUSES WITH THE SAME TYPE AND RATING AS MARKED NEAR EACH FUSE.

SERVICE INFORMATION

While servicing, use an isolation transformer for protection from AC line shock. After the original service problem has been corrected, make a check of the following:

FIRE AND SHOCK HAZARD

1. Be sure that all components are positioned to avoid a possibility of adjacent component shorts. This is especially important on items trans-ported to and from the repair shop.
2. Verify that all protective devices such as insulators, barriers, covers, shields, strain reliefs, power supply cords, and other hardware have been reinstalled per the original design. Be sure that the safety purpose of the polarized line plug has not been defeated.
3. Soldering must be inspected to discover possible cold solder joints, solder splashes, or sharp solder points. Be certain to remove all loose foreign particles.
4. Check for physical evidence of damage or deterioration to parts and components, for frayed leads or damaged insulation (including the AC cord), and replace if necessary.
5. No lead or component should touch a high current device or a resistor rated at 1 watt or more. Lead tension around protruding metal surfaces must be avoided.
6. After reassembly of the set, always perform an AC leakage test on all exposed metallic parts of the cabinet (the channel selector knobs, antenna terminals, handle and screws) to be sure that set is safe to operate without danger of electrical shock. DO NOT USE A LINE ISOLATION TRANSFORMER DURING THIS TEST. Use an AC voltmeter having 5000 ohms per volt or more sensitivity in the following manner: Connect a 1500 ohm, 10 watt resistor, paralleled by a .15 mfd 150V AC type capacitor between a known good earth ground water pipe, conduit, etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination of 1500 ohm resistor and .15 mfd capacitor. Reverse the AC plug by using a non-polarized adaptor and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed 0.75 volts RMS. This corresponds to 0.5 milliamp AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.



TIPS ON PROPER INSTALLATION

1. Never install any receiver in a closed-in recess, cubbyhole, or closely fitting shelf space over, or close to, a heat duct, or in the path of heated air flow.
2. Avoid conditions of high humidity such as: outdoor patio installations where dew is a factor, near steam radiators where steam leakage is a factor, etc.
3. Avoid placement where draperies may obstruct venting. The customer should also avoid the use of decorative scarves or other coverings that might obstruct ventilation.
4. Wall- and shelf-mounted installations using a commercial mounting kit must follow the factory-approved mounting instructions. A product mounted to a shelf or platform must retain its original feet (or the equivalent thickness in spacers) to provide adequate air flow across the bottom. Bolts or screws used for fasteners must not touch any parts or wiring. Perform leakage tests on customized installations.
5. Caution customers against mounting a product on a sloping shelf or in a tilted position, unless the receiver is properly secured.
6. A product on a roll-about cart should be stable in its mounting to the cart. Caution the customer on the hazards of trying to roll a cart with small casters across thresholds or deep pile carpets.
7. Caution customers against using extension cords. Explain that a forest of extensions, sprouting from a single outlet, can lead to disastrous consequences to home and family.

SERVICING PRECAUTIONS

CAUTION : Before servicing the DVD Recorder covered by this service data and its supplements and addends, read and follow the SAFETY PRECAUTIONS. NOTE : if unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions in this publications, always follow the safety precautions.
Remembers Safety First:

General Servicing Precautions

1. Always unplug the DVD Recorder AC power cord from the AC power source before:
   (1) Removing or reinstalling any component, circuit board, module, or any other assembly.
   (2) Disconnection or reconnecting any internal electrical plug or other electrical connection.
   (3) Connecting a test substitute in parallel with an electrolytic capacitor.
   Caution : A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.

2. Do not spray chemicals on or near this DVD Recorder or any of its assemblies.

3. Unless specified otherwise in this service data, clean electrical contacts by applying an appropriate contact cleaning solution to the contacts with a pipe cleaner, cotton-tipped swab, or comparable soft applicator.
   Unless specified otherwise in this service data, lubrication of contacts is not required.

4. Do not defeat any plug/socket B+ voltage interlocks with whitch instruments covered by this service manual might be equipped.

5. Do not apply AC power to this DVD Recorder and/or any of its electrical assemblies unless all solid-state device heat sinks are cerrectly installed.

6. Always connect test instrument ground lead to the appropriate ground before connection the test instrument positive lead. Always remove the test instrument ground lead last.

Insulation Checking Procedure

Disconnect the attachment plug from the AC outlet and turn the power on. Connect an insulation resistance meter(500V) to the blades of the attachment plug. The insulation resistance between each blade of the attachment plug and accessible conductive parts (Note 1) should be more than 1M-ohm.

Note 1 : Accessible Conductive Parts including Metal panels, Input terminals, Earphone jacks, etc.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field effect transistors and semiconductor chip components.
The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.

3. Use only a grouned-tip soldering iron to solder or unsolder ES devices.

4. Use only an anti-static solder removal device. Some solder removal devices not classified a “anti-static” can generate electrical charges sufficient to damage ES devices.

5. Do not use freon-propelled chemicals. These can generate electrical charge sufficient to damage ES devices.

6. Do not remove a replacement ES device from its protec tive package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil, or comparable conductive material).

7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   Caution : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Normally harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

SPECIFICATIONS

• GENERAL

Power requirements	AC 110-240V, 50/60 Hz
Power consumption	30W
Dimensions (approx.)	430x69x280 mm (w x h x d)
Mass (approx.)	3.8 Kg
Operating temperature	5°C to 35°C
Operating humidity	5 % to 90 %
Television system	PAL B/G colour system
Recording format	PAL

• RECORDING

Recording format	DVD Video Recording, DVD-VIDEO
Recordable discs	DVD+ReWritable, DVD+Recordable
Recordable time	Approx. 1 hour (HQ mode), 2 hours (SQ mode), 4 hours (LQ mode), 6 hours (EQ mode)
Video recording format	
Sampling frequency	27MHz
Compression format	MPEG 2
Audio recording format	
Sampling frequency	48kHz
Compression format	Dolby Digital

• PLAYBACK

Frequency response	DVD (PCM 48 kHz): 8 Hz to 22 kHz, CD: 8 Hz to 20 kHz DVD (PCM 96 kHz): 8 Hz to 44 kHz
Signal-to-noise ratio	More than 100 dB (AUDIO OUT connector)
Harmonic distortion	Less than 0.008% THD (AUDIO OUT connector)
Dynamic range	More than 95 dB (AUDIO OUT connector)

• INPUTS

ANTENNA IN	Antenna input, 75 ohms
VIDEO IN	1.0 Vp-p 75 ohms, sync negative, RCA Jack x 1, SCART x 2
AUDIO IN	0 dBm more than 47 kohms, RCA Jack x 1, SCART x 2
SUPER IN	(Y)1.0V(p-p), 75Ω, negative sync, Mini DIN 4-pin x 1 (C) 0.3V(p-p), 75Ω

• OUTPUTS

VIDEO OUT	1 Vp-p 75 Ω, sync negative, RCA jack x 1
Audio output (digital audio)	0.5 V (p-p), 75 Ω, RCA jack x 1
Audio output (analog audio)	2.0 Vrms (1 KHz, 0 dB), 600 Ω/SCART

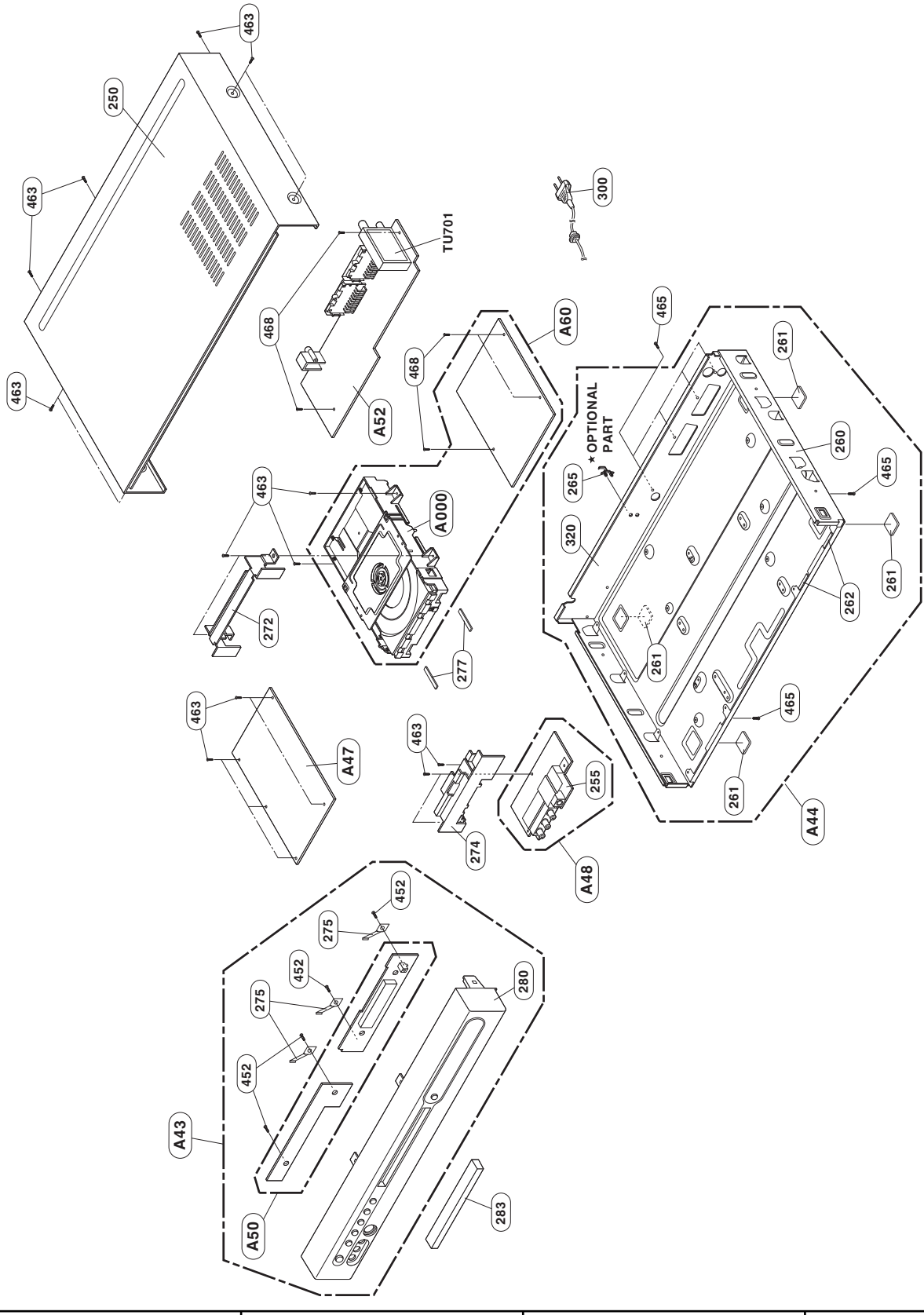
SECTION 2

CABINET & MAIN CHASSIS

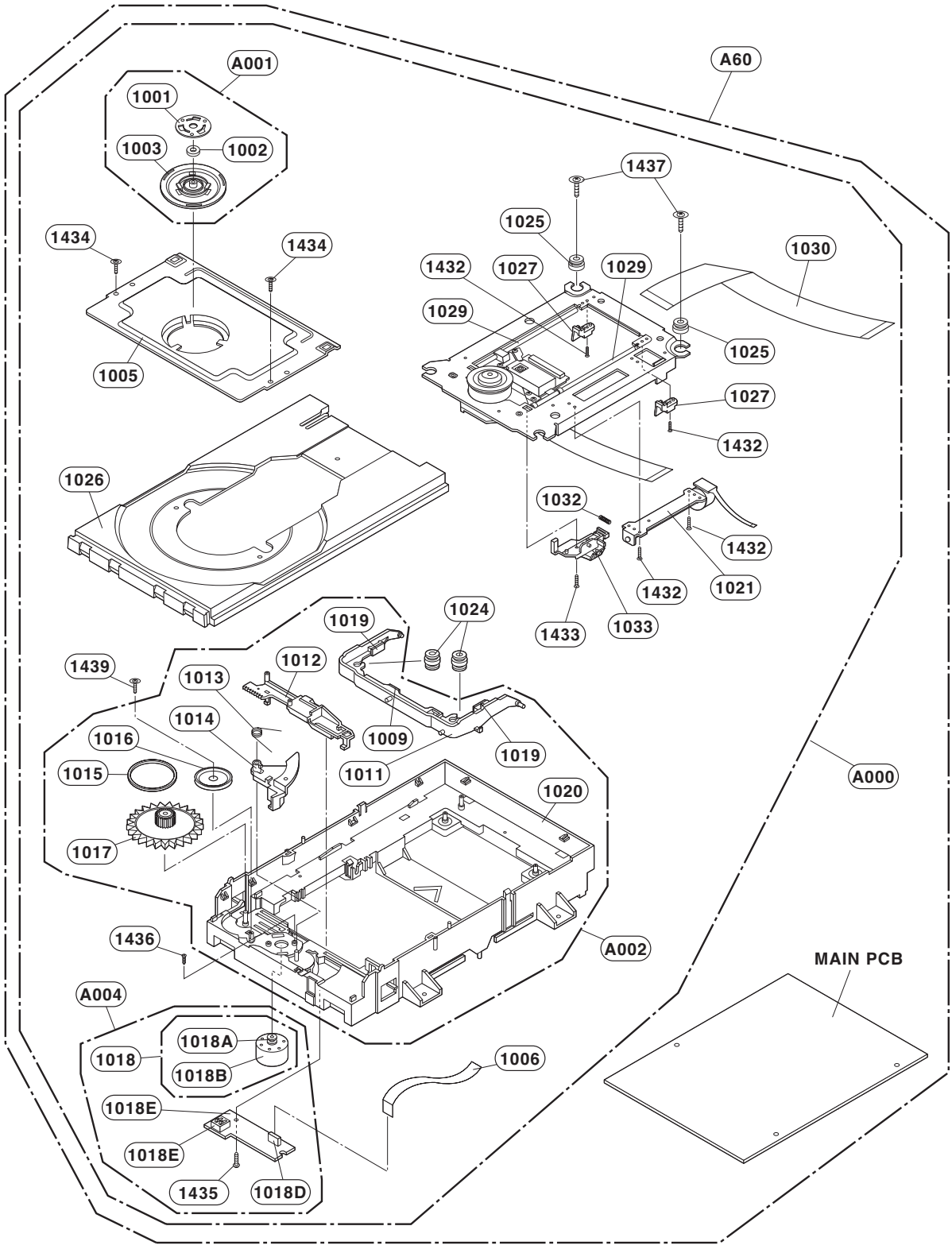
CONTENTS

EXPLODED VIEWS

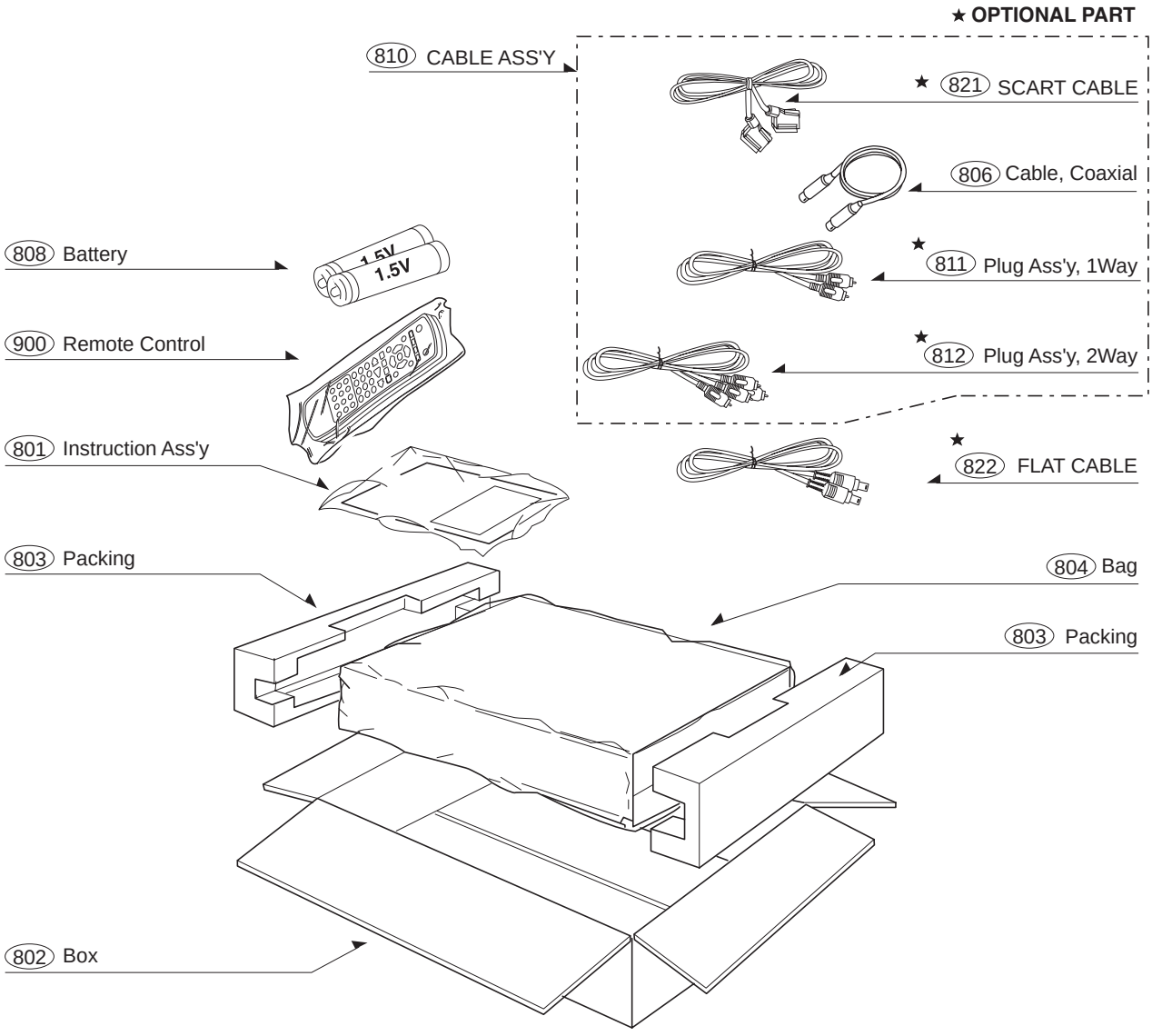
1. Cabinet and Main Frame Section



2. DECK MECHANISM SECTION(DR-06 + MAIN PCB)



3. Packing Accessory Section



SECTION 3
ELECTRICAL

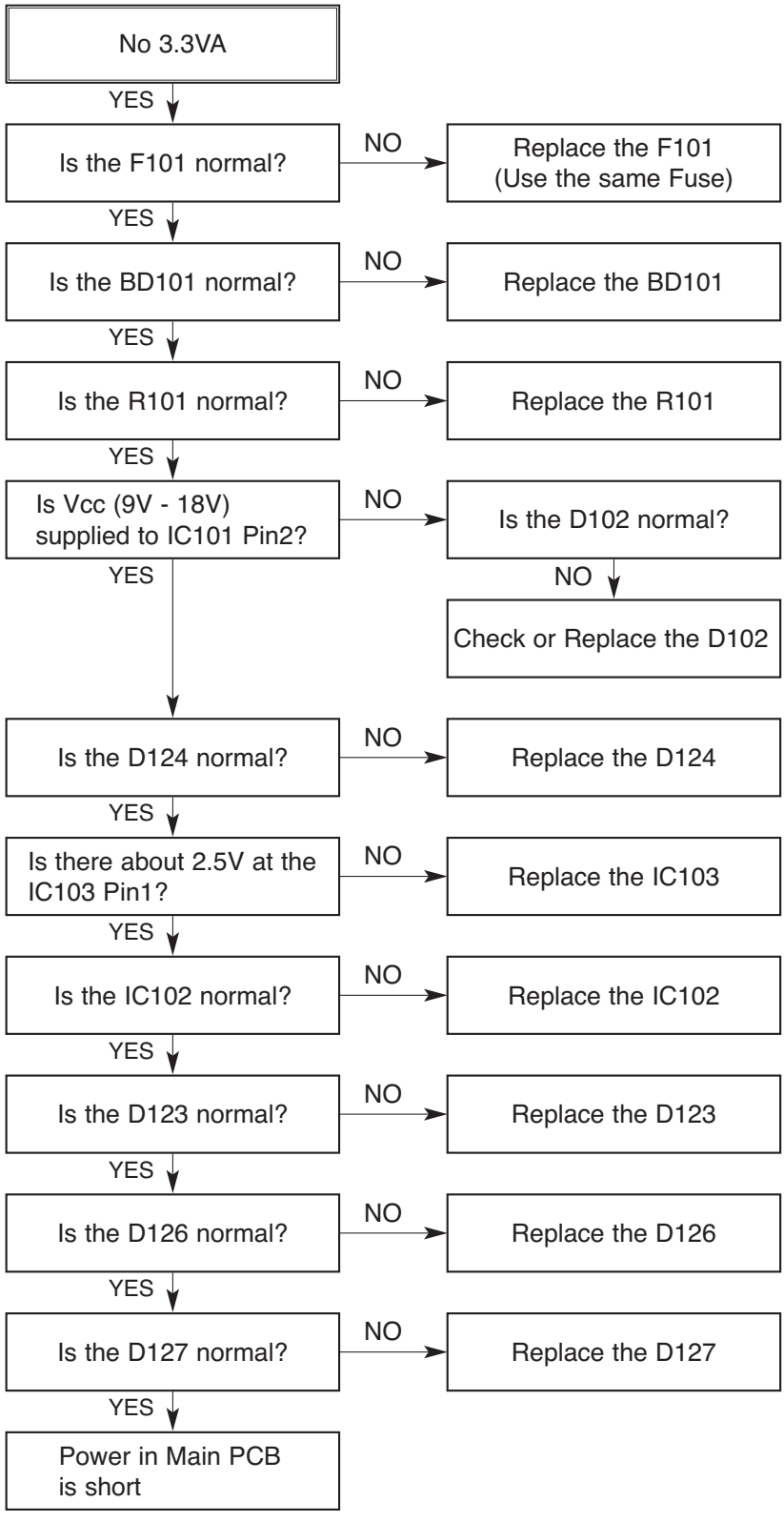
CONTENTS

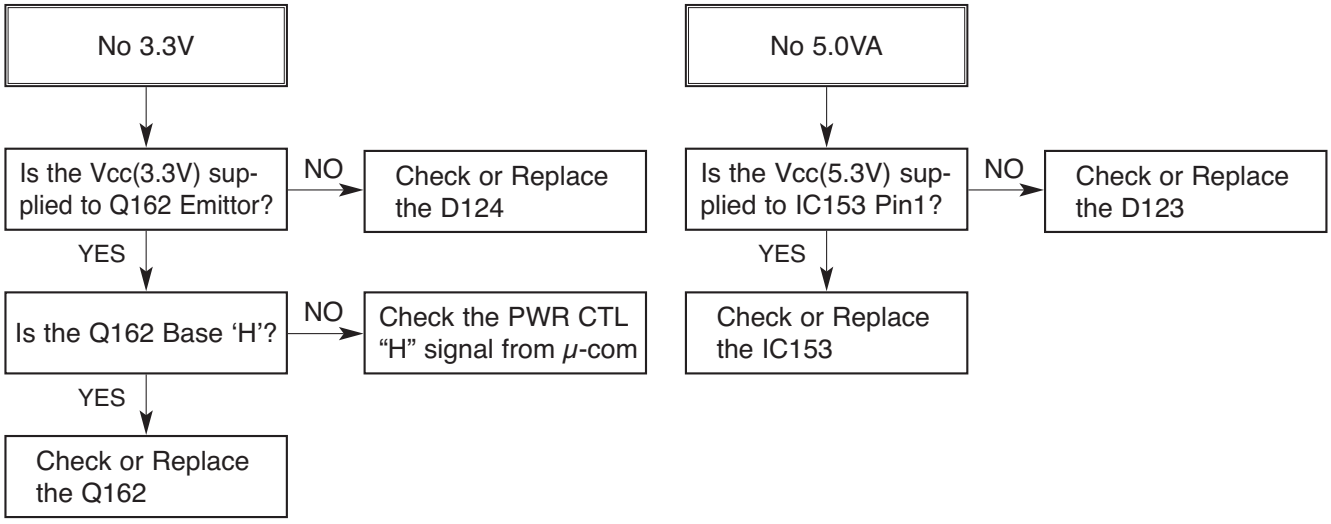
VDR PART

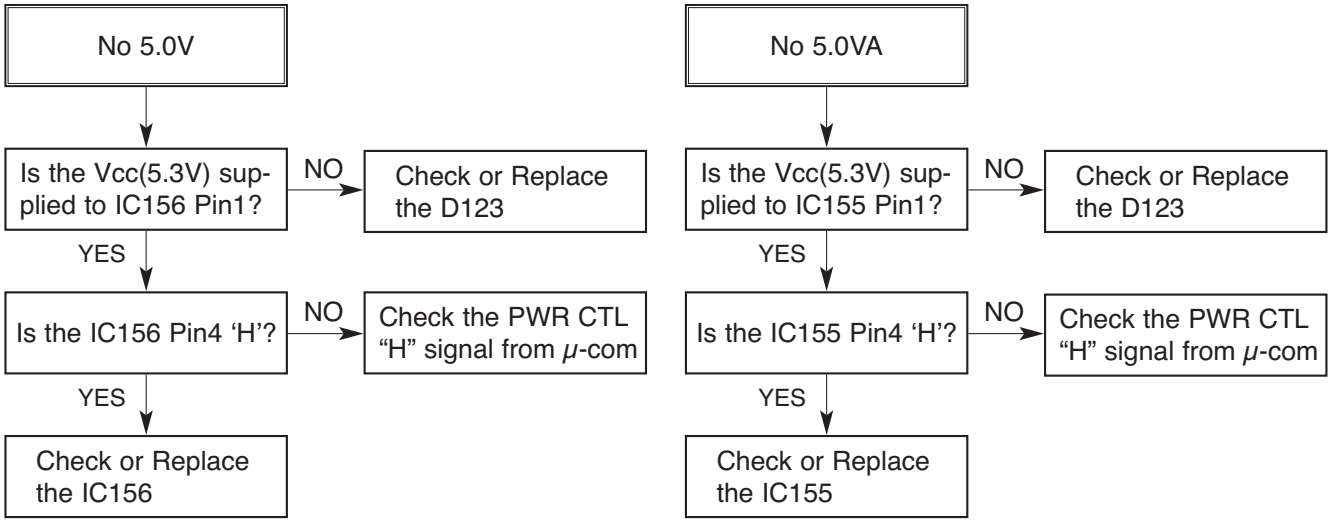
VDR PART

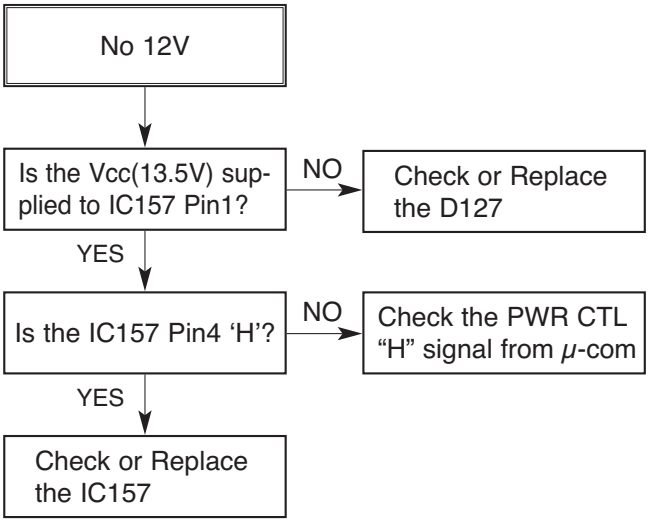
ELECTRICAL TROUBLESHOOTING GUIDE

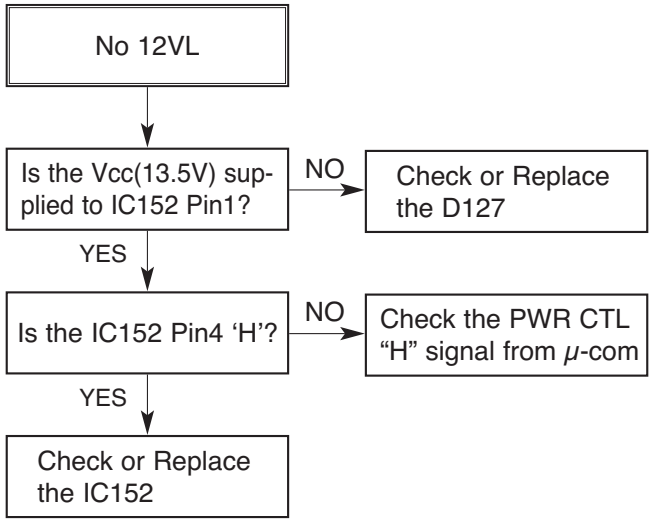
1. Power (SMPS) Circuit

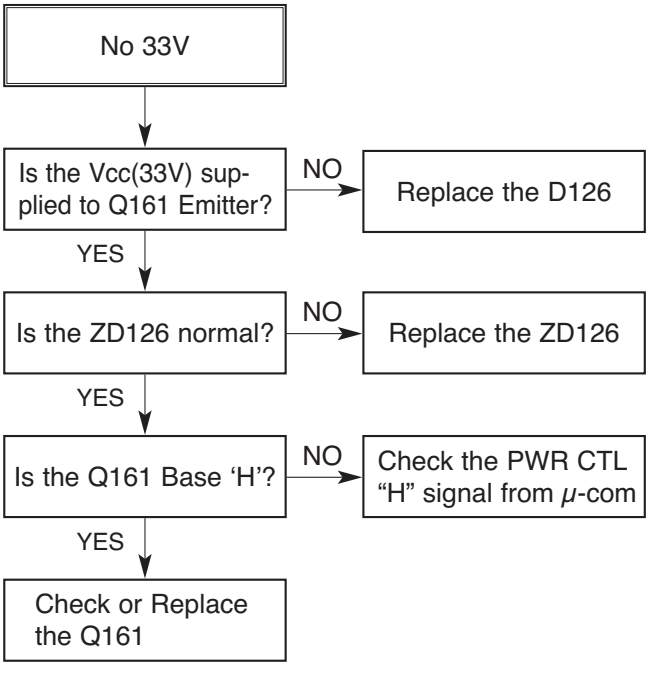



No 3.3V
Is the Vcc(3.3V) supplied to Q162 Emittor?
NO
Check or Replace the D124
YES
Is the Q162 Base 'H'?
NO
Check the PWR CTL "H" signal from μ-com
YES
Check or Replace the Q162
No 5.0VA
Is the Vcc(5.3V) supplied to IC153 Pin1?
NO
Check or Replace the D123
YES
Check or Replace the IC153

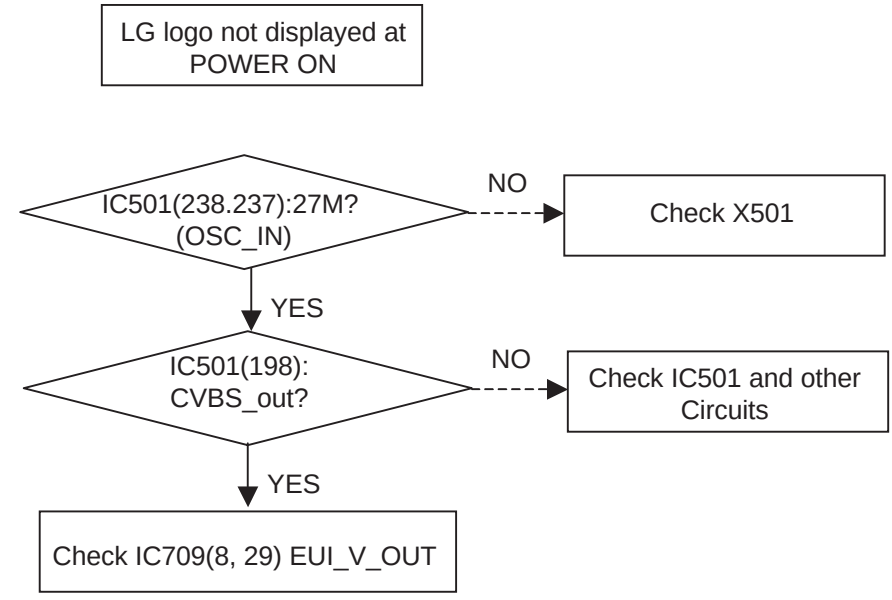

No 5.0V
Is the Vcc(5.3V) supplied to IC156 Pin1?
NO
Check or Replace the D123
YES
Is the IC156 Pin4 'H'?
NO
Check the PWR CTL "H" signal from μ-com
YES
Check or Replace the IC156
No 5.0VA
Is the Vcc(5.3V) supplied to IC155 Pin1?
NO
Check or Replace the D123
YES
Is the IC155 Pin4 'H'?
NO
Check the PWR CTL "H" signal from μ-com
YES
Check or Replace the IC155

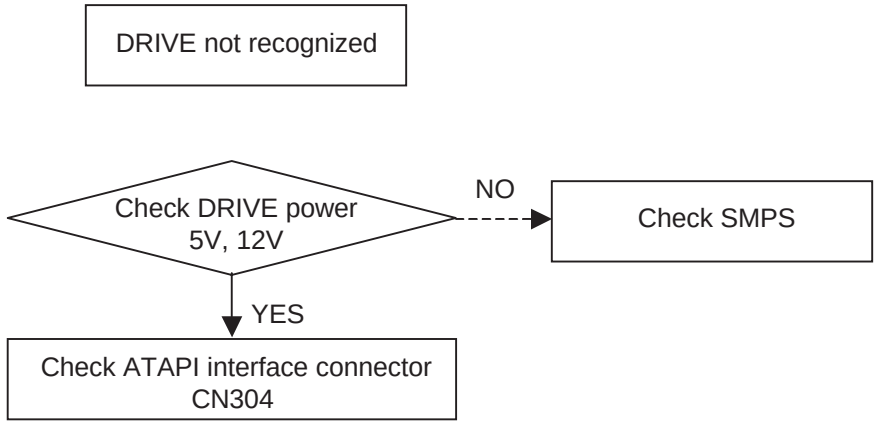

No 12V
Is the Vcc(13.5V) supplied to IC157 Pin1?
NO
Check or Replace the D127
YES
Is the IC157 Pin4 'H'?
NO
Check the PWR CTL "H" signal from μ-com
YES
Check or Replace the IC157


No 12VL
Is the Vcc(13.5V) supplied to IC152 Pin1?
NO
Check or Replace the D127
YES
Is the IC152 Pin4 'H'?
NO
Check the PWR CTL "H" signal from μ-com
YES
Check or Replace the IC152

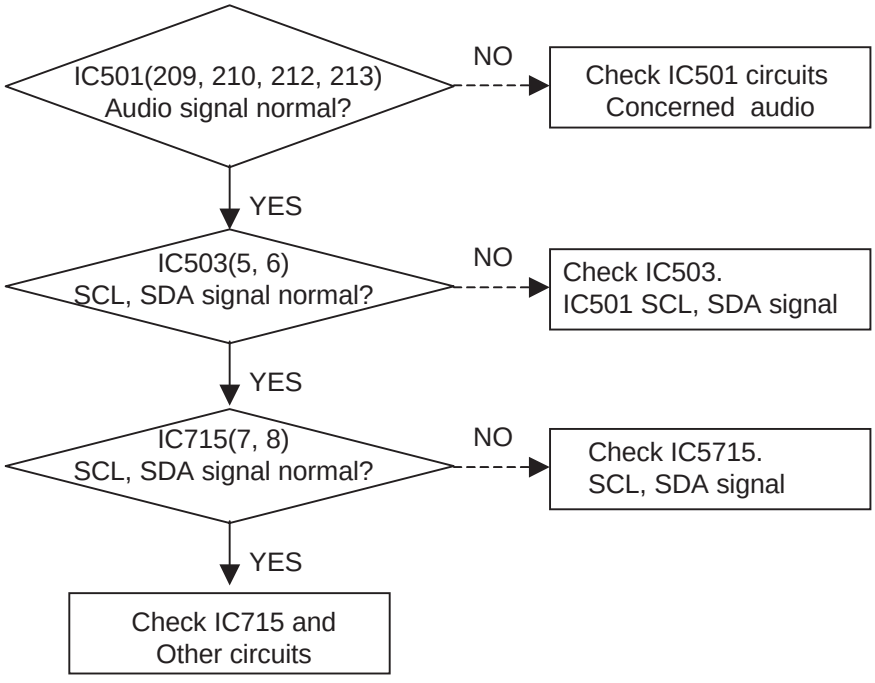

No 33V
Is the Vcc(33V) supplied to Q161 Emitter?
NO
Replace the D126
YES
Is the ZD126 normal?
NO
Replace the ZD126
YES
Is the Q161 Base 'H'?
NO
Check the PWR CTL "H" signal from μ-com
YES
Check or Replace the Q161

2. SYSTEM CIRCUIT

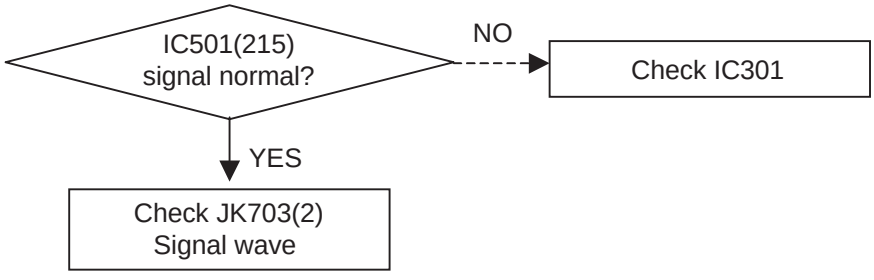


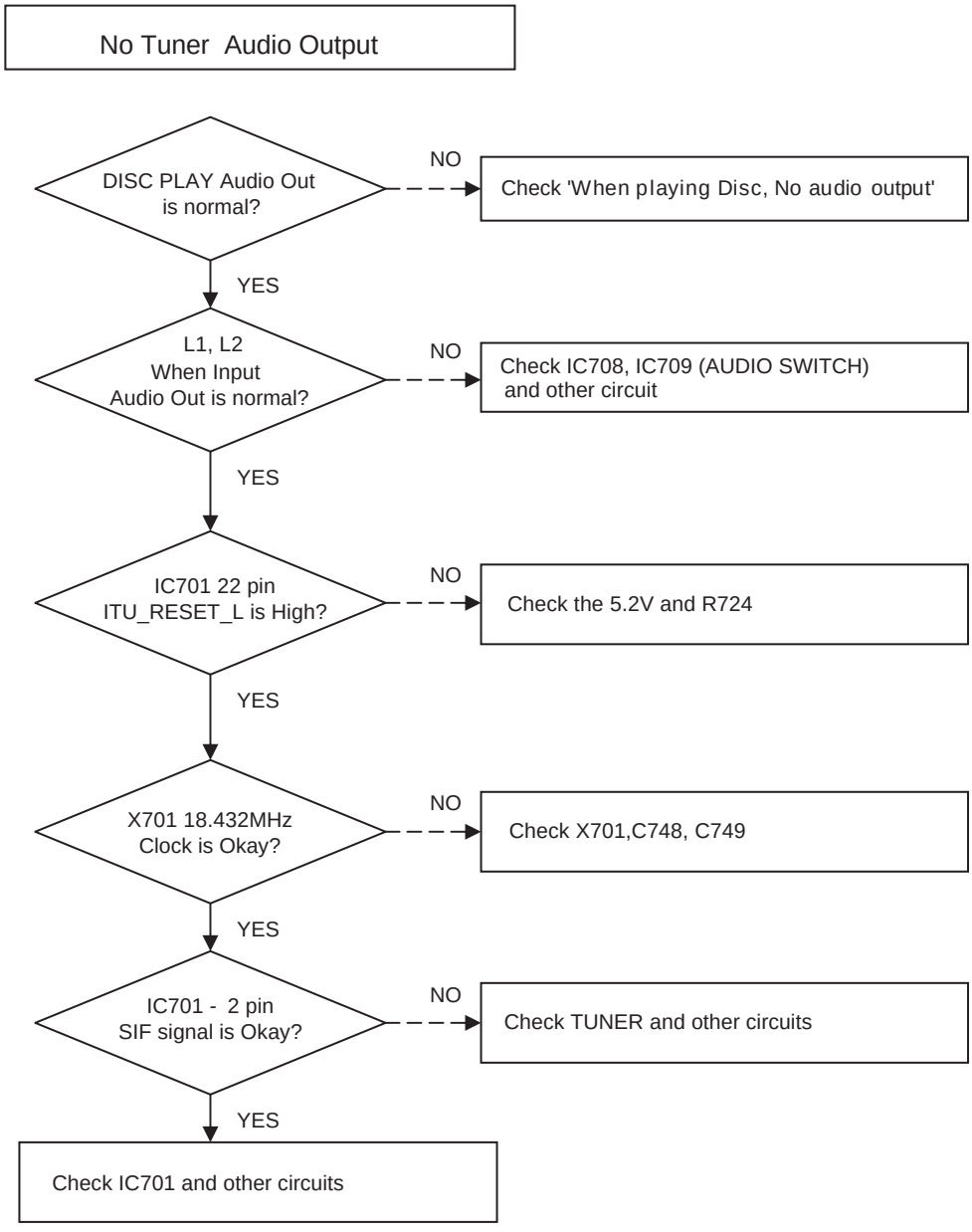


When playing DISC, no audio output

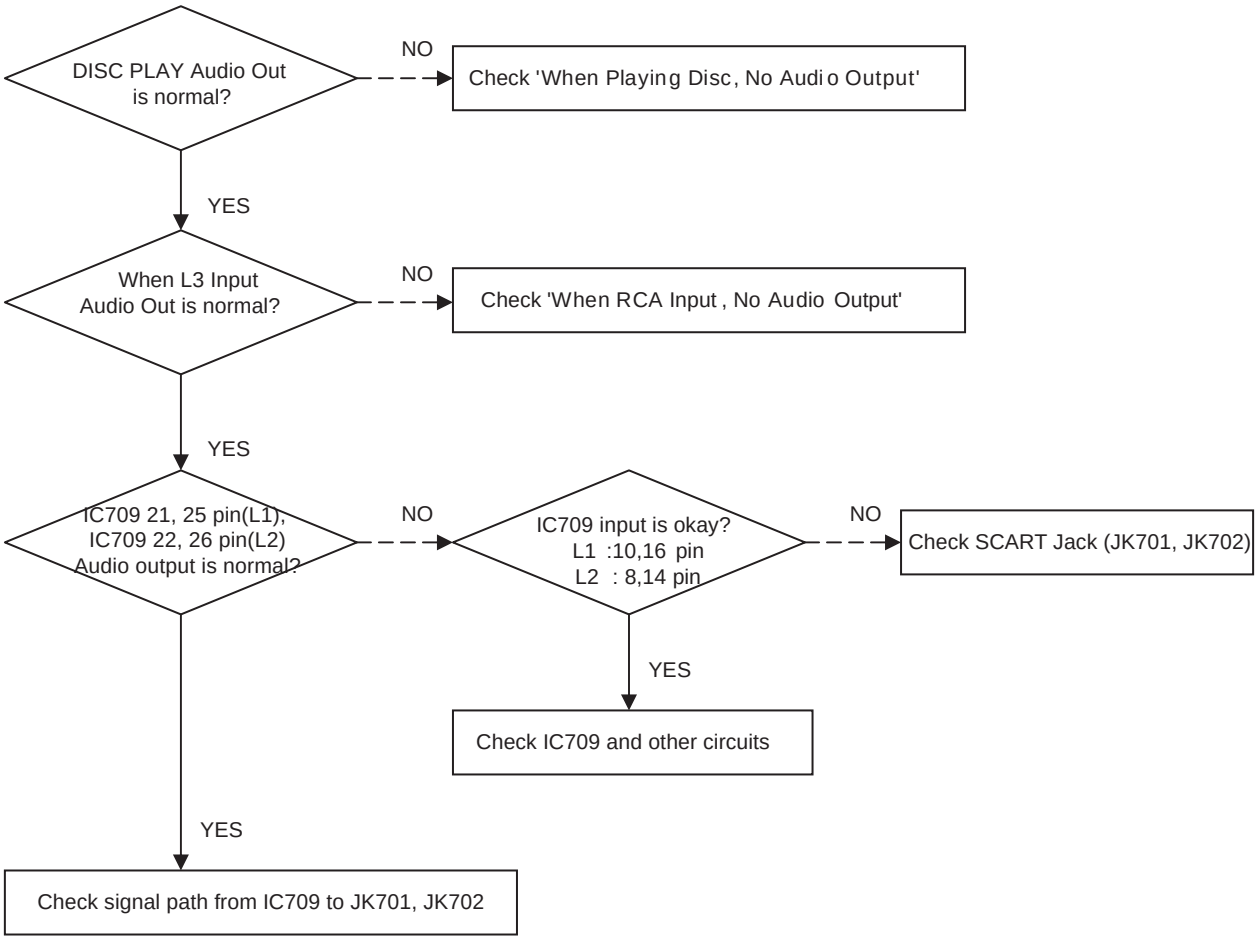


No DIGITAL output

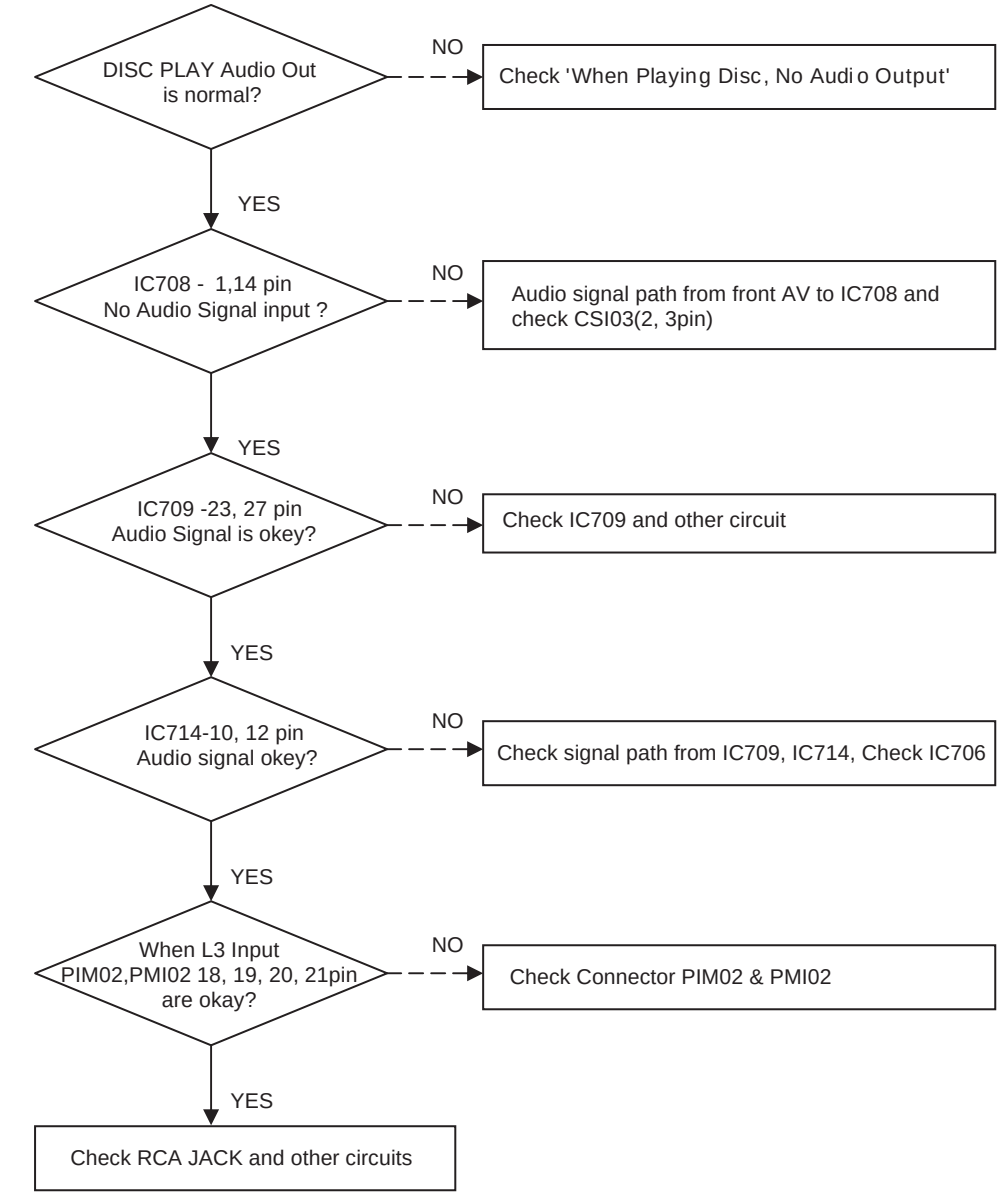



No Tuner Audio Output
DISC PLAY Audio Out is normal?
NO
Check 'When playing Disc, No audio output'
YES
L1, L2 When Input Audio Out is normal?
NO
Check IC708, IC709 (AUDIO SWITCH) and other circuit
YES
IC701 22 pin ITU_RESET_L is High?
NO
Check the 5.2V and R724
YES
X701 18.432MHz Clock is Okay?
NO
Check X701,C748, C749
YES
IC701 - 2 pin SIF signal is Okay?
NO
Check TUNER and other circuits
YES
Check IC701 and other circuits

When SCART Input, No Audio Output



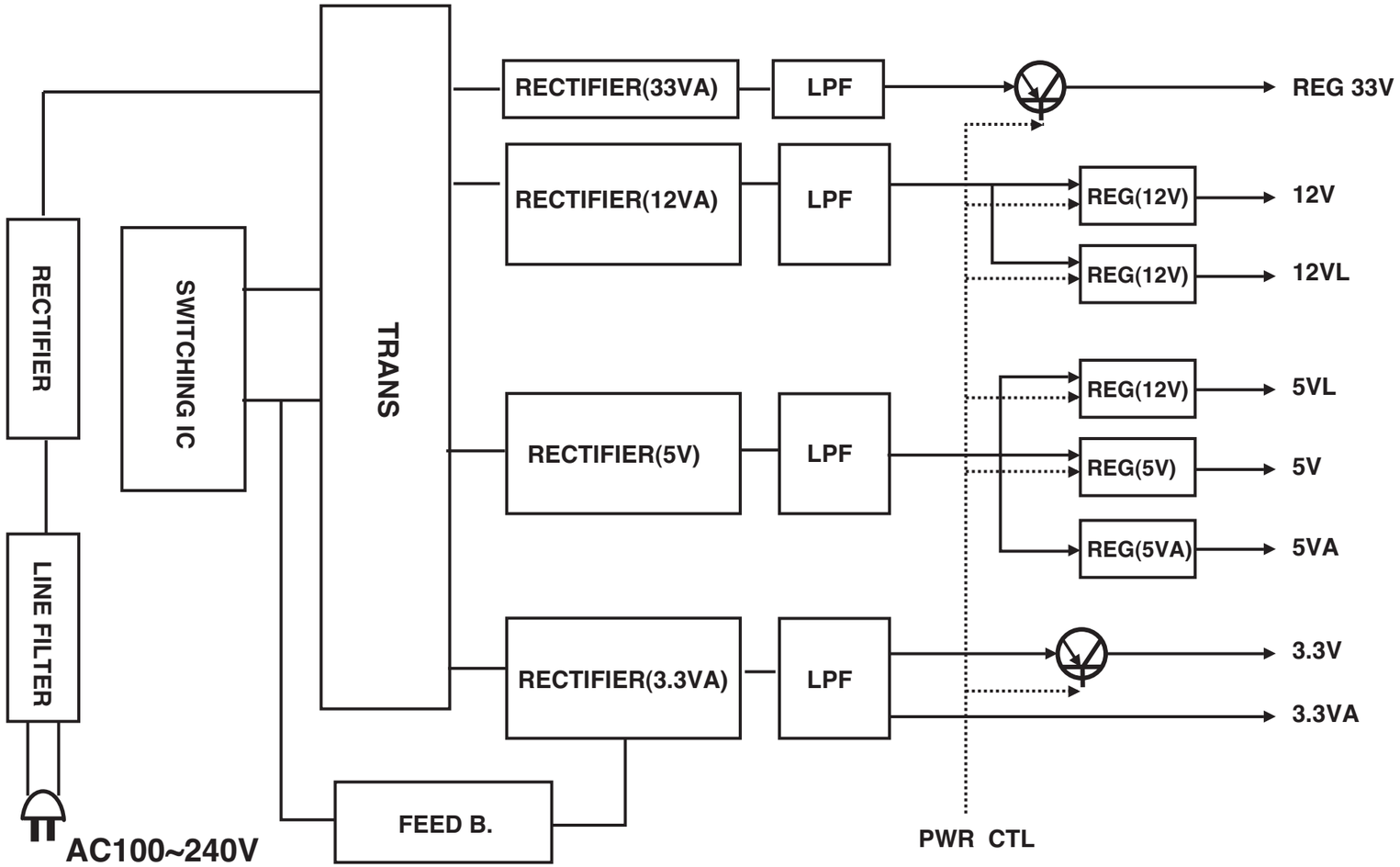
When Front RCA Input, No Audio Output



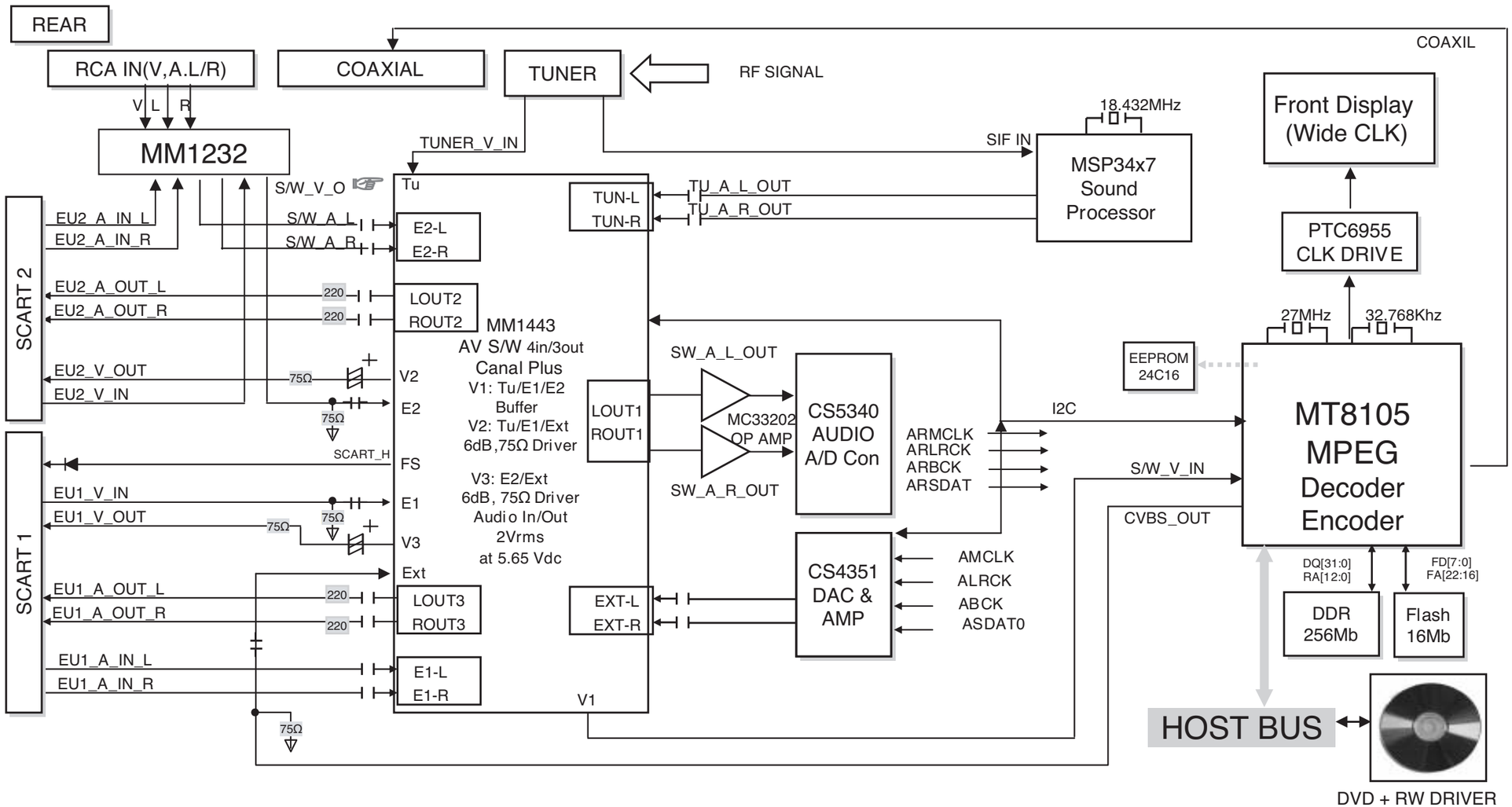
MEMO

BLOCK DIAGRAMS

1. SMPS Block Diagram



2. VIDEO / AUDIO Block Diagram



CIRCUIT DIAGRAMS

1. POWER CIRCUIT DIAGRAM

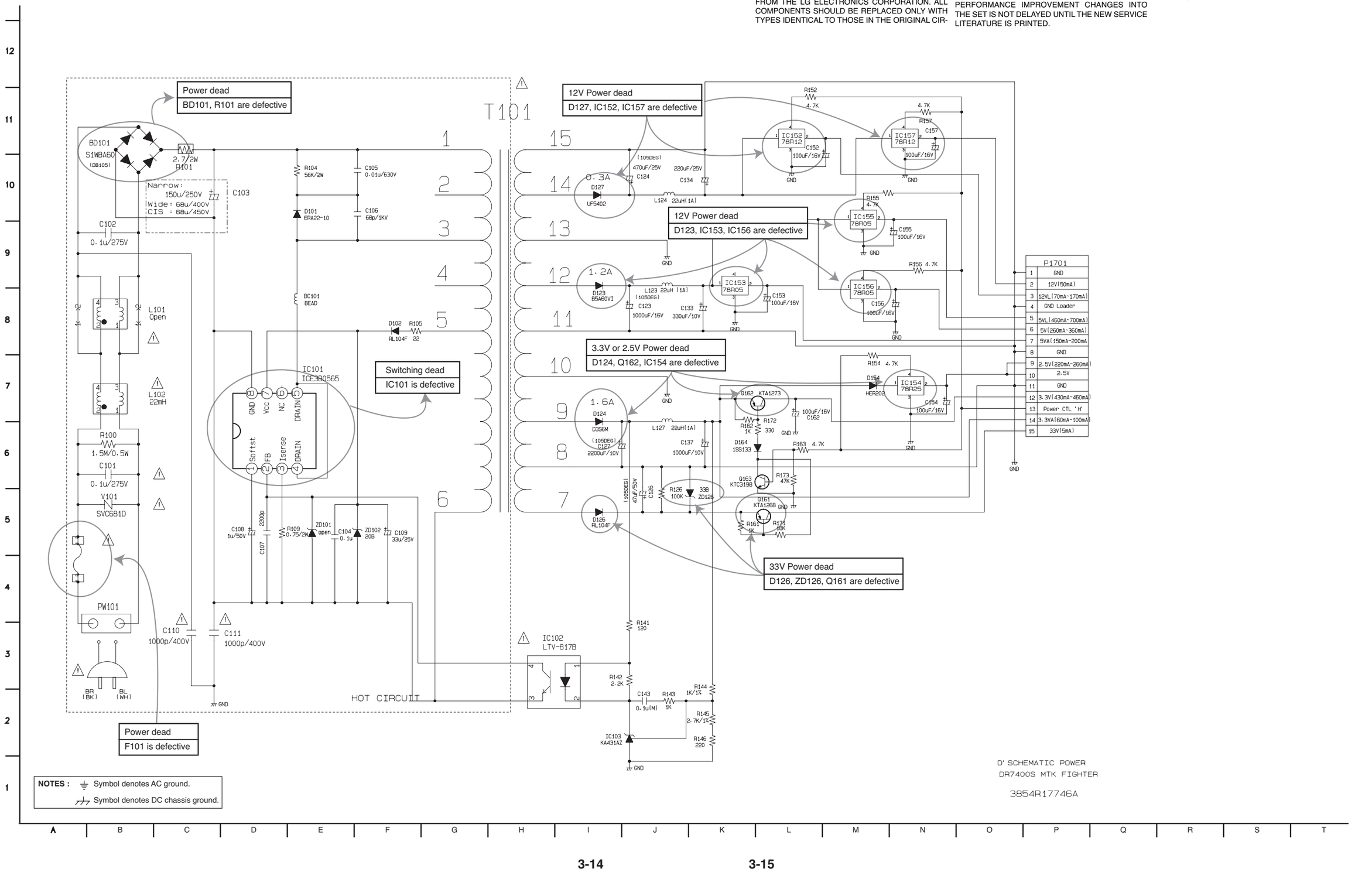
IMPORTANT SAFETY NOTICE

WHEN SERVICING THIS CHASSIS, UNDER NO CIRCUMSTANCES SHOULD THE ORIGINAL DESIGN BE MODIFIED OR ALTERED WITHOUT PERMISSION FROM THE LG ELECTRONICS CORPORATION. ALL COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT. SPECIAL COMPONENTS ARE SHADED ON THE SCHEMATIC FOR EASY IDENTIFICATION.

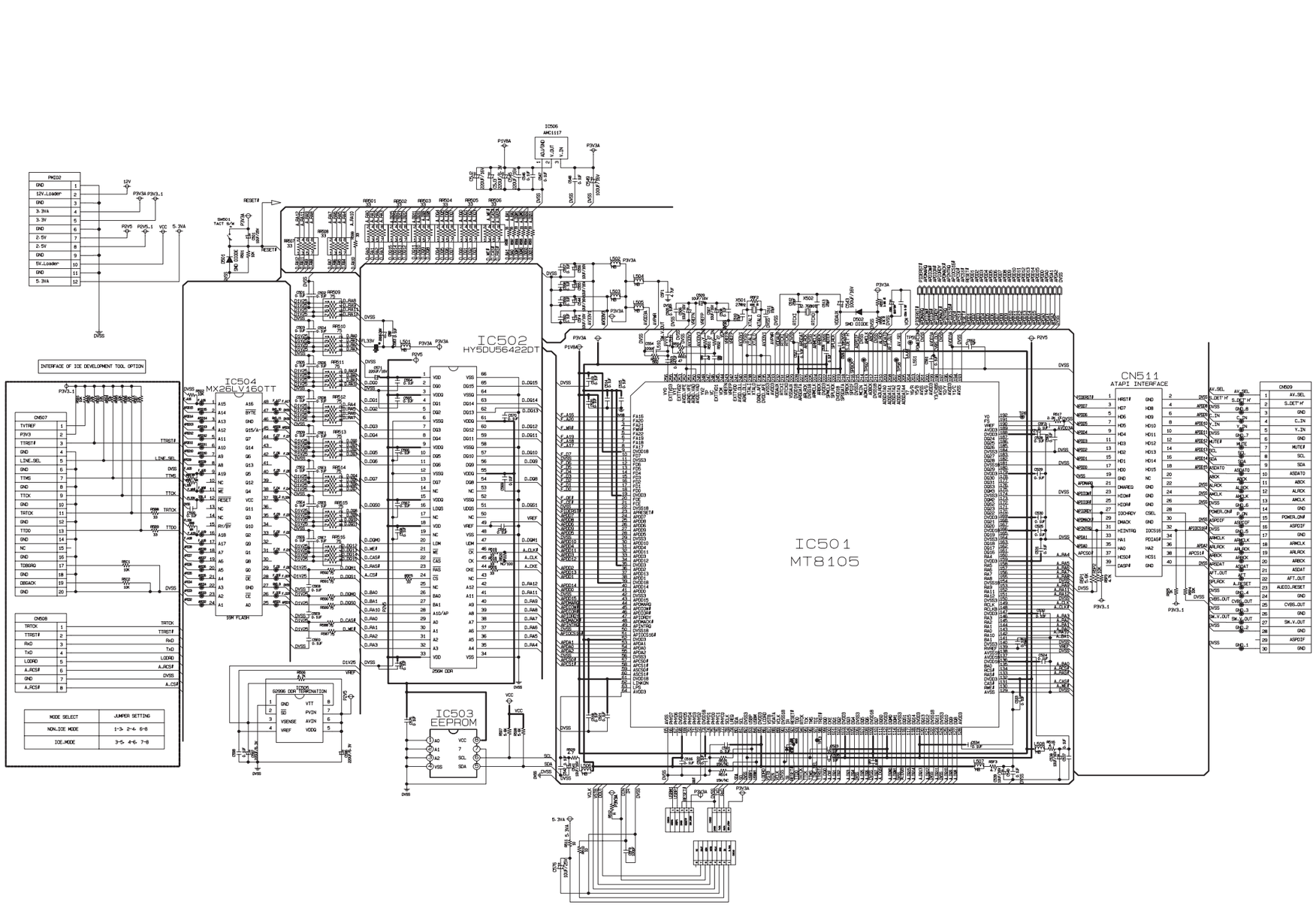
THIS CIRCUIT DIAGRAM MAY OCCASIONALLY DIFFER FROM THE ACTUAL CIRCUIT USED. THIS WAY, IMPLEMENTATION OF THE LATEST SAFETY AND PERFORMANCE IMPROVEMENT CHANGES INTO THE SET IS NOT DELAYED UNTIL THE NEW SERVICE LITERATURE IS PRINTED.

NOTE :

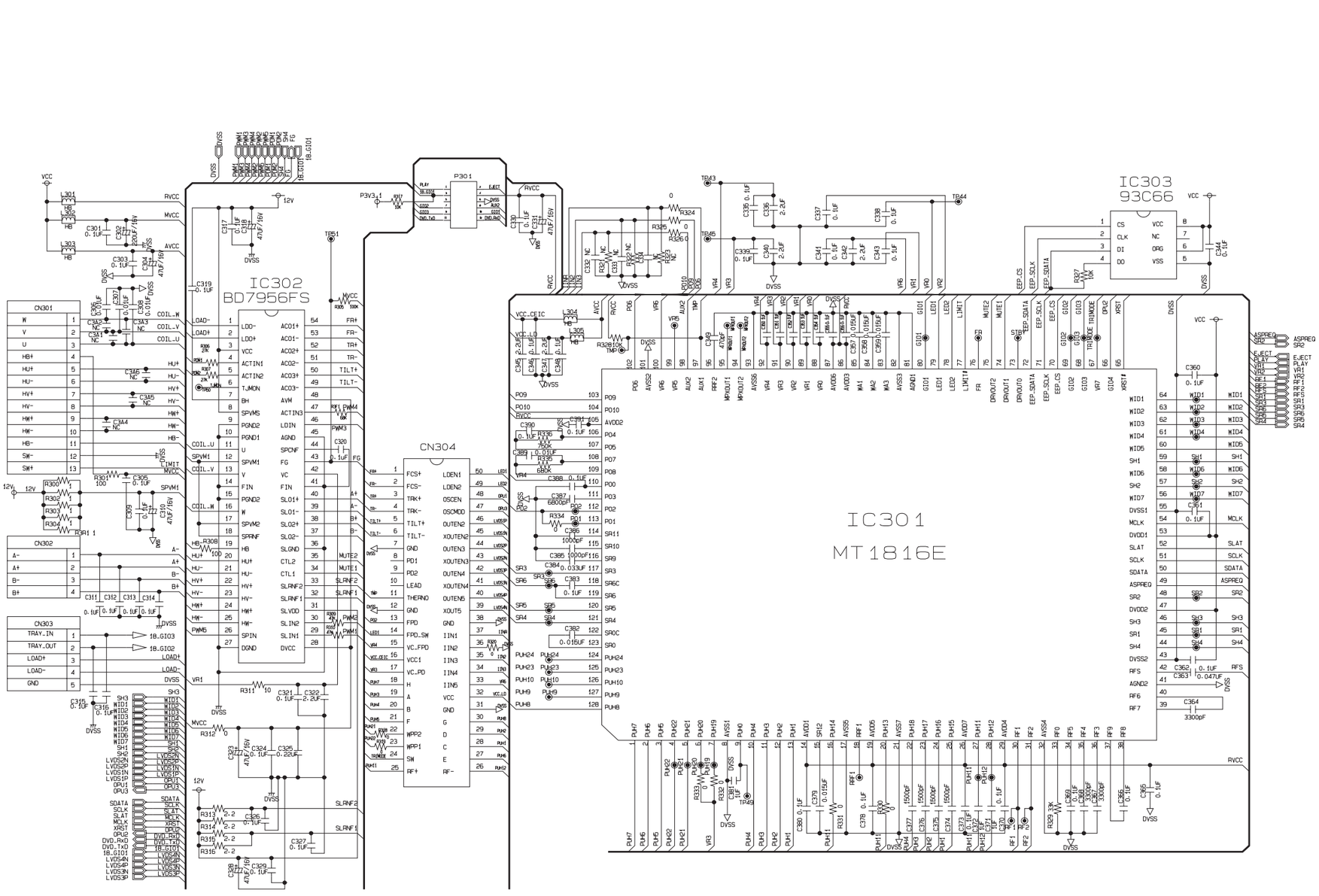
1. Shaded(■) parts are critical for safety. Replace only with specified part number.
2. Voltages are DC-measured with a digital voltmeter during Play mode.



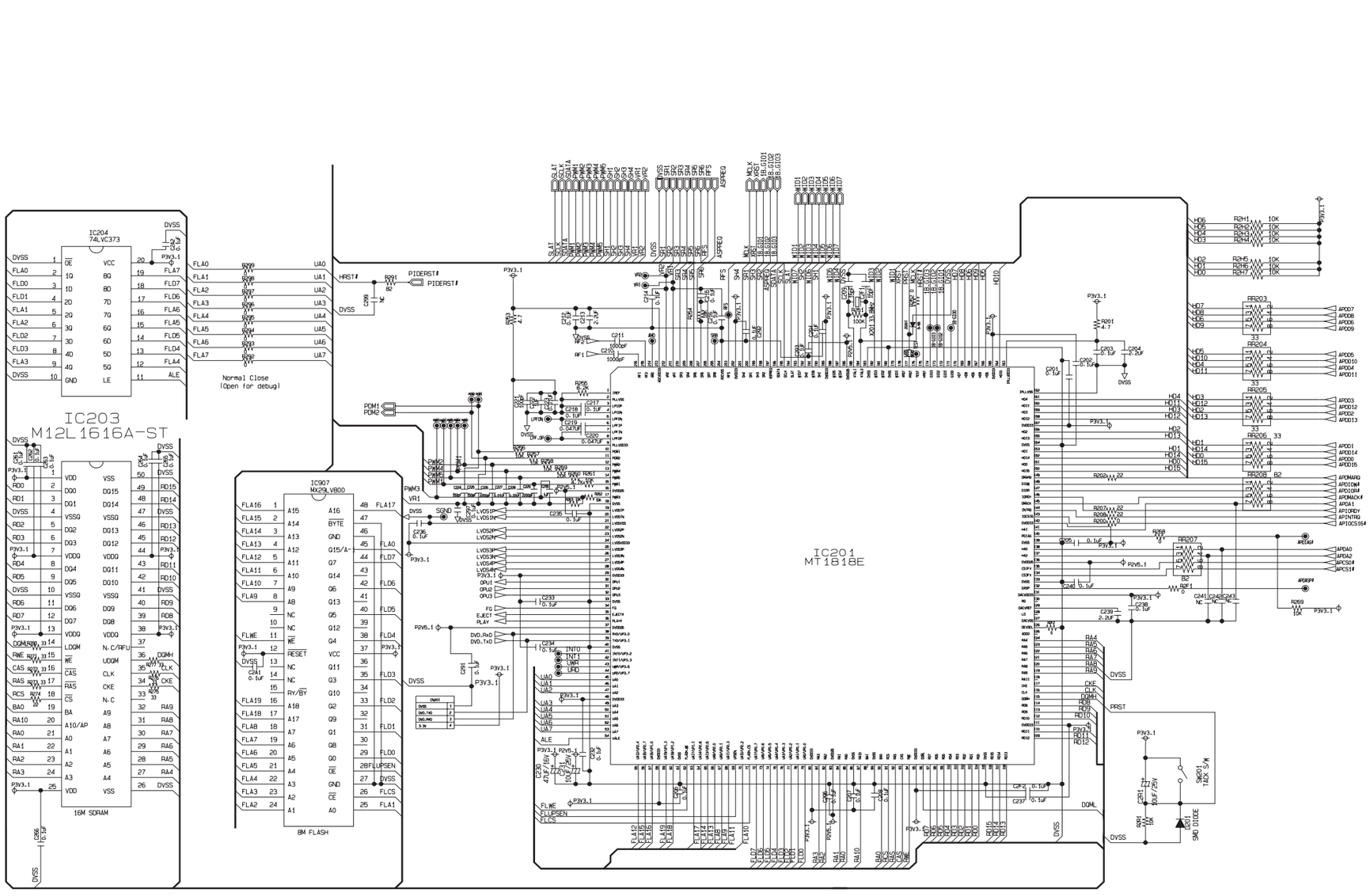
2. MPEG CIRCUIT DIAGRAM



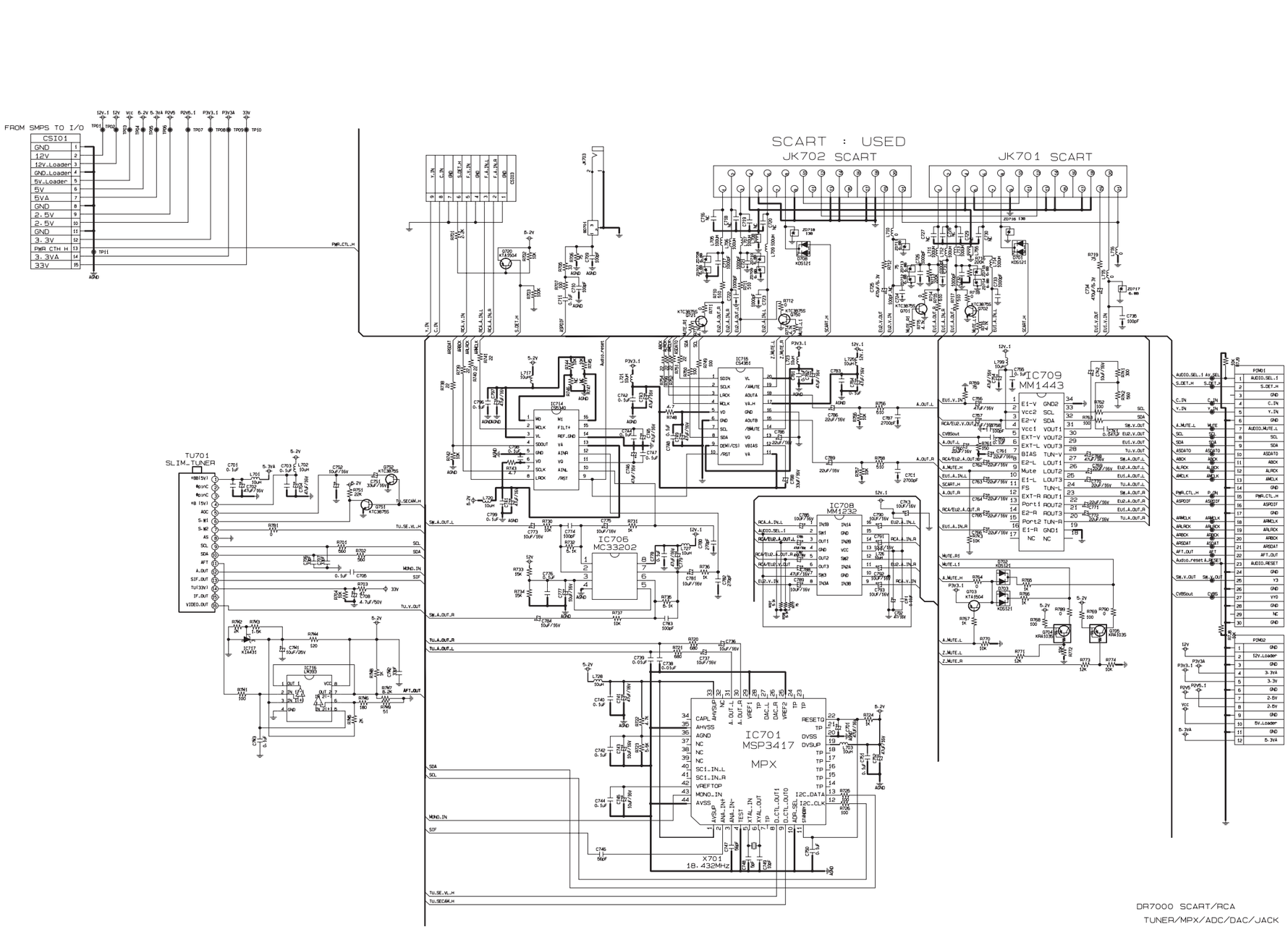
3. DSP CIRCUIT DIAGRAM



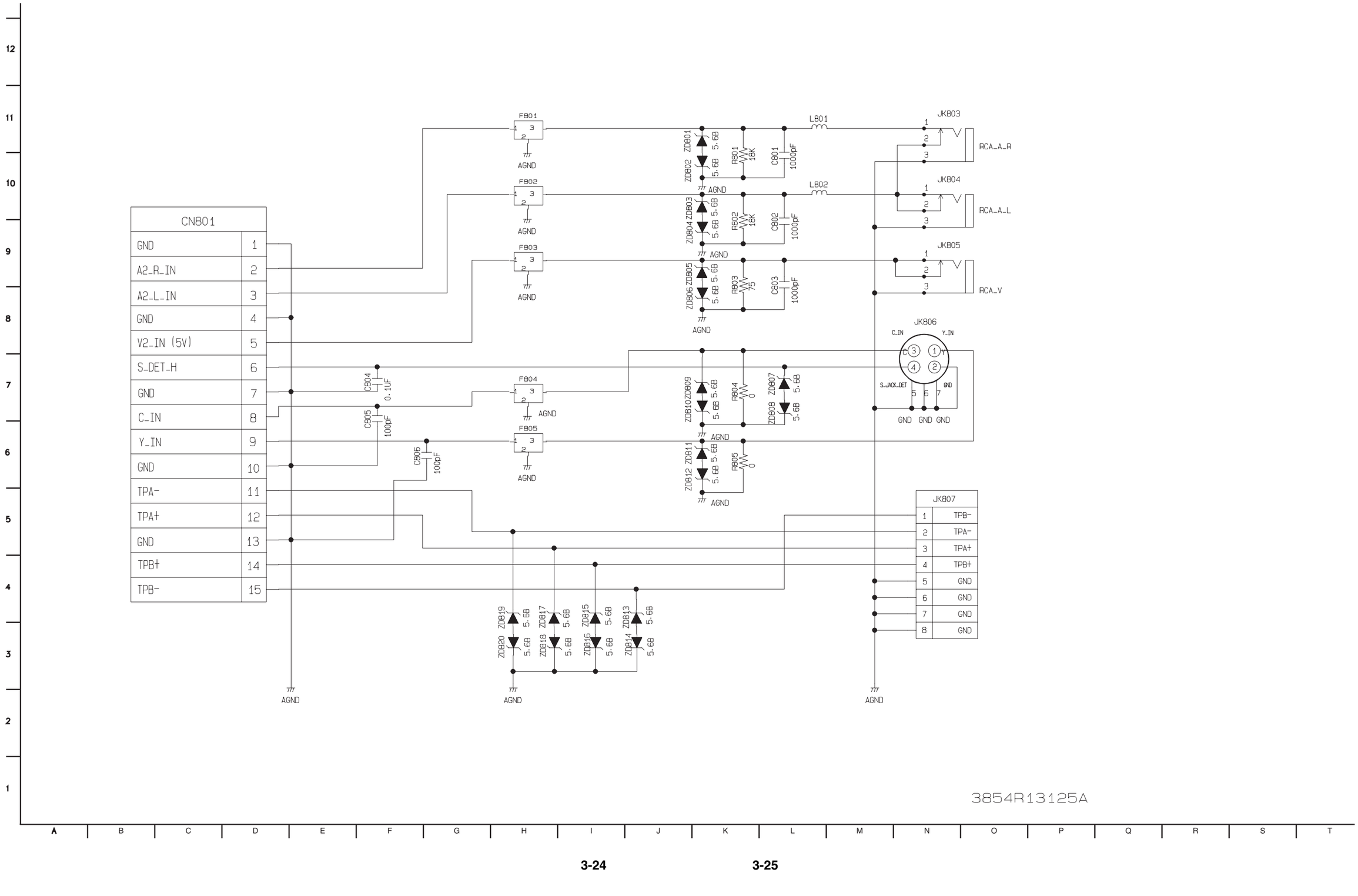
4. RF CIRCUIT DIAGRAM



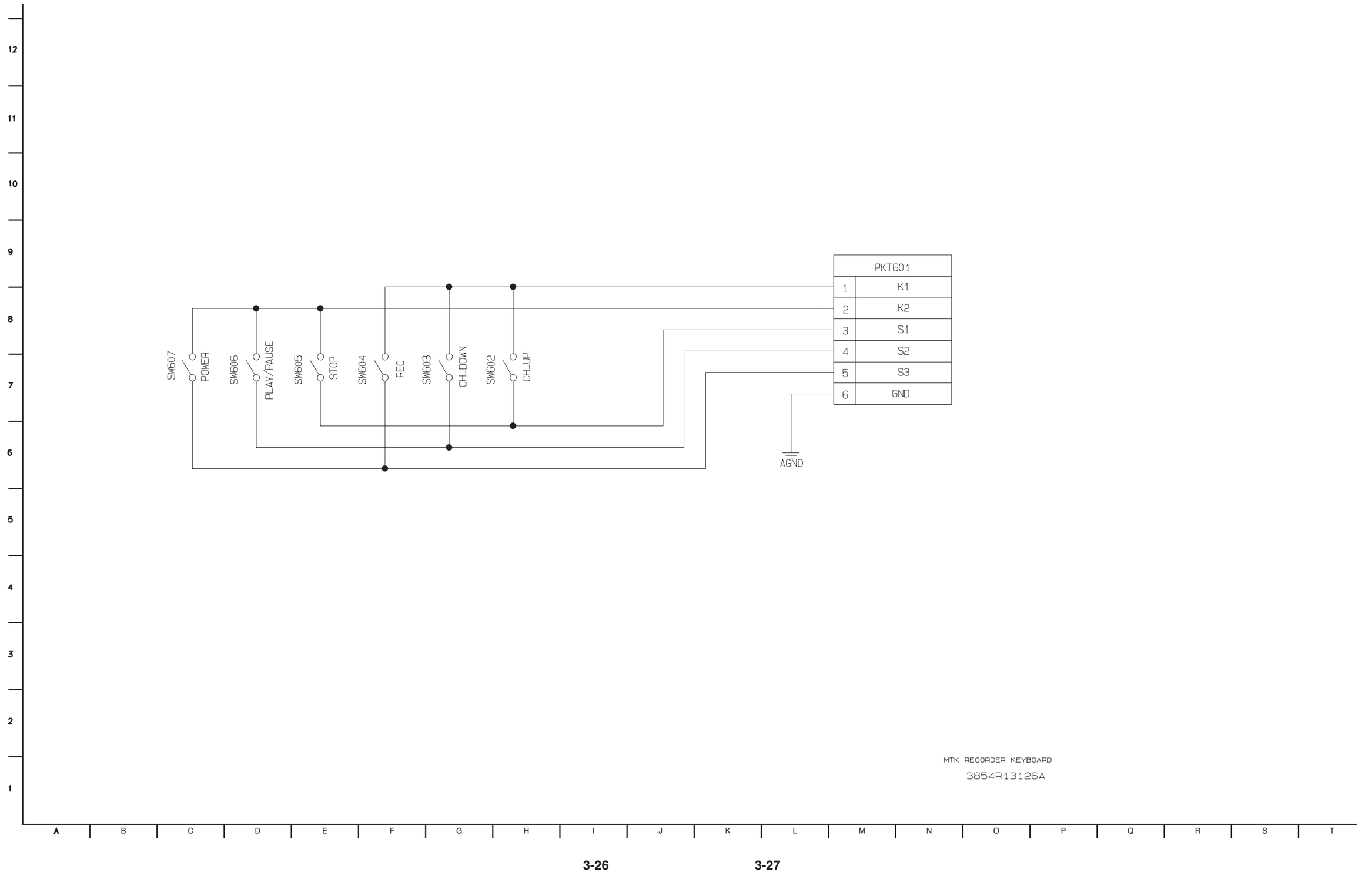
5. TUNER/MPX/ADC/DAC/JACK CIRCUIT DIAGRAM



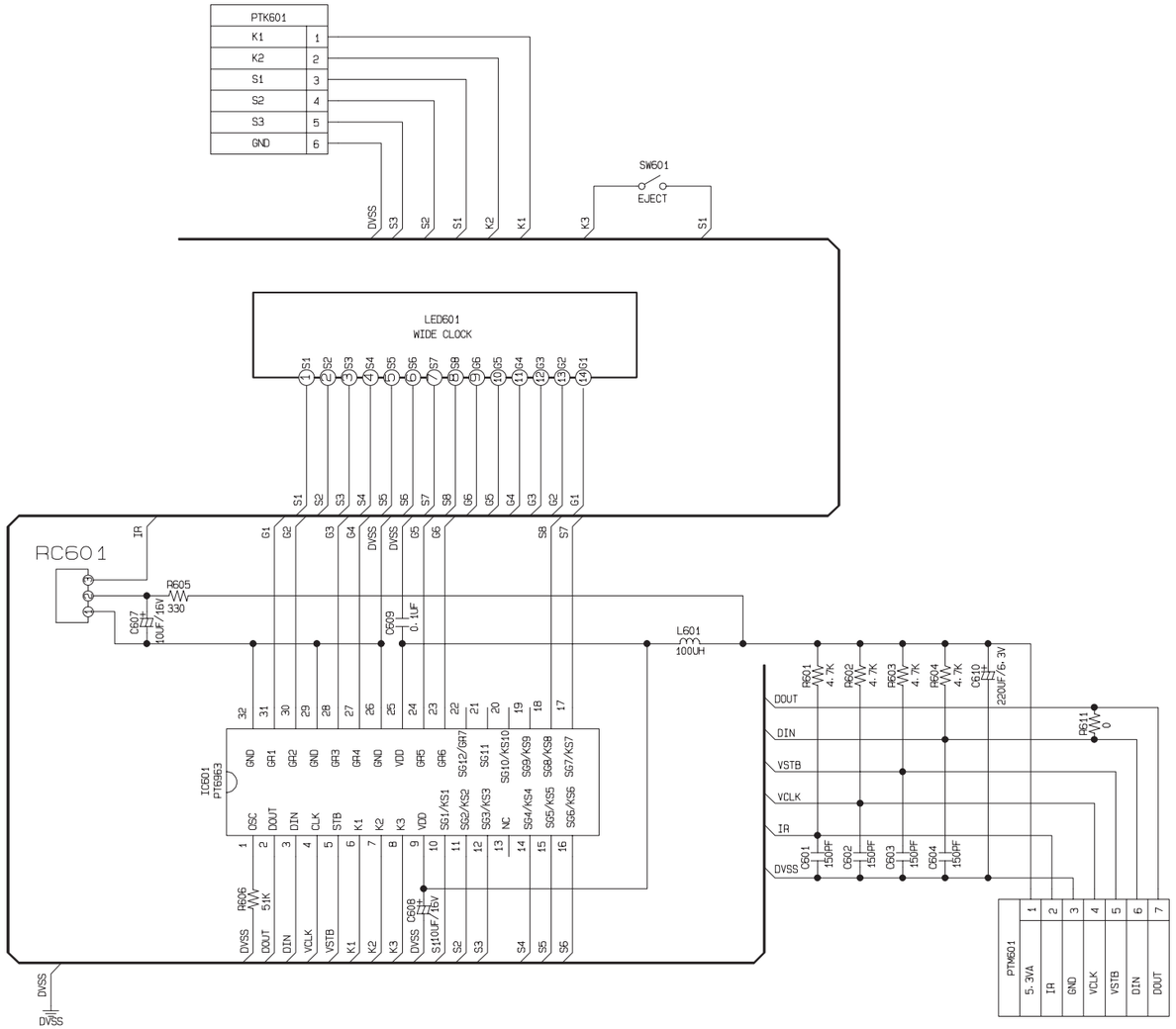
6. FRONT JACK CIRCUIT DIAGRAM



7. KEY CIRCUIT DIAGRAM



8. TIMER CIRCUIT DIAGRAM

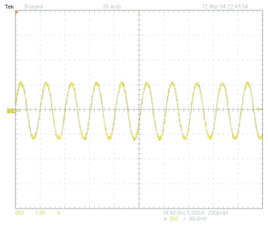


3854R13120A

TIMER BOARD

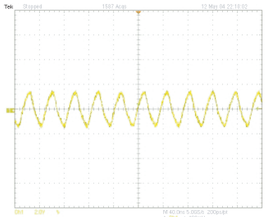
• WAVEFORMS

①



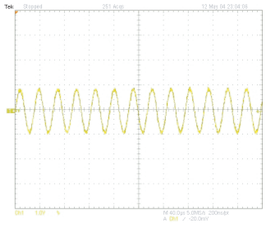
X201
33.86MHz

②



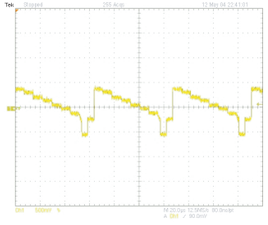
X501
27MHz

③



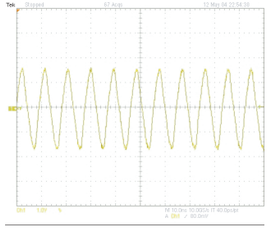
X502
32.768KHz

④



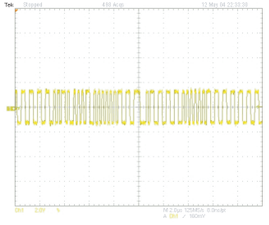
IC501(248)
Y_IN

⑤



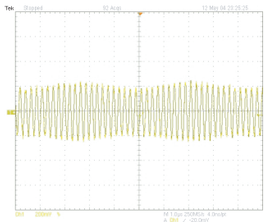
IC502
SDRAM_CLK

⑥



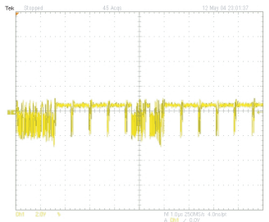
IC501(227)
SPDIF

⑦



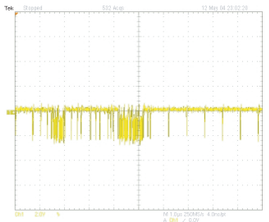
IC701(57)
SIF_OUT

⑧



IC504(28)
FLASH_OE

⑨



IC504(11)
FLASH_WE

• CIRCUIT VOLTAGE CHART

MODE / PIN NO.	EE	PB	REC
IC201			
1	2.51	2.49	2.48
2	1.13	1.11	1.15
3	2.50	2.49	2.48
4	1.13	1.13	1.14
5	1.16	1.14	1.18
6	0.00	0.00	0.00
7	1.18	1.15	1.26
8	1.14	1.15	1.14
9	2.50	2.49	2.49
10	1.12	1.08	1.01
11	1.14	1.14	1.12
12	0.00	0.00	0.00
13	1.16	1.06	1.17
14	0.00	0.00	0.00
15	2.50	2.49	2.48
16	1.22	1.21	1.21
17	0.00	0.00	0.00
18	2.50	2.49	2.49
19	0.00	0.00	0.00
20	0.54	0.54	0.52
21	1.27	1.27	1.33
22	1.22	1.20	1.14
23	1.26	1.28	1.33
24	1.80	1.75	1.62
25	0.00	0.00	0.00
26	1.24	1.23	1.23
27	1.25	1.25	1.24
28	1.17	1.14	1.09
29	1.16	1.13	1.09
30	1.17	1.14	1.13
31	1.19	1.17	1.15
32	1.22	1.21	1.21
33	2.50	2.49	2.48
34	0.00	0.00	0.00
35	1.22	1.21	1.21
36	1.23	1.22	1.22
37	1.22	1.22	1.22
38	1.22	1.21	1.22
39	1.23	1.22	1.22
40	1.16	1.14	1.08
41	1.16	1.14	1.08
42	1.17	1.14	1.08
43	0.00	0.00	0.00
44	1.99	1.99	1.98
45	1.27	1.26	1.26
46	1.26	1.26	1.25
47	0.53	0.53	0.52
48	0.00	0.00	0.00
49	1.25	1.24	1.24
50	2.51	2.49	2.48
67	1.13	1.11	1.15
68	2.50	2.49	2.48
69	1.13	1.13	1.14
70	1.16	1.14	1.18

MODE / PIN NO.	EE	PB	REC
71	0.00	0.00	0.00
72	1.18	1.15	1.26
73	1.14	1.15	1.14
74	2.50	2.49	2.49
75	1.12	1.08	1.01
76	1.14	1.14	1.12
77	0.00	0.00	0.00
78	1.16	1.06	1.17
79	0.00	0.00	0.00
80	2.50	2.49	2.48
81	1.22	1.21	1.21
82	0.00	0.00	0.00
83	2.50	2.49	2.49
84	0.00	0.00	0.00
85	0.54	0.54	0.52
86	1.27	1.27	1.33
87	1.22	1.20	1.14
88	1.26	1.28	1.33
89	1.80	1.75	1.62
90	0.00	0.00	0.00
91	1.24	1.23	1.23
92	1.25	1.25	1.24
93	1.17	1.14	1.09
94	1.16	1.13	1.09
95	1.17	1.14	1.13
96	1.19	1.17	1.15
97	1.22	1.21	1.21
98	2.50	2.49	2.48
99	0.00	0.00	0.00
100	1.22	1.21	1.21
101	1.23	1.22	1.22
102	1.22	1.22	1.22
103	1.22	1.21	1.22
104	1.23	1.22	1.22
105	1.16	1.14	1.08
106	1.16	1.14	1.08
107	1.17	1.14	1.08
108	0.00	0.00	0.00
109	1.99	1.99	1.98
110	1.27	1.26	1.26
111	1.26	1.26	1.25
112	0.53	0.53	0.52
113	0.00	0.00	0.00
114	1.25	1.24	1.24
115	0.00	0.00	0.00
116	1.21	1.21	1.20
117	0.00	0.00	0.00
118	0.00	0.00	0.00
119	1.14	1.12	1.15
120	2.49	2.49	2.48
121	1.14	1.11	1.15
122	1.14	1.11	1.18
123	0.00	0.00	0.00
124	1.15	1.11	1.22
125	1.15	1.14	1.13

MODE / PIN NO.	EE	PB	REC
126	2.49	2.49	2.48
127	1.15	1.20	1.05
128	1.15	1.15	1.12
129	0.00	0.00	0.00
130	2.51	2.49	2.48
131	1.13	1.11	1.15
132	2.50	2.49	2.48
133	1.13	1.13	1.14
134	1.16	1.14	1.18
135	0.00	0.00	0.00
136	1.18	1.15	1.26
137	1.14	1.15	1.14
138	2.50	2.49	2.49
139	1.12	1.08	1.01
140	1.14	1.14	1.12
141	0.00	0.00	0.00
142	1.16	1.06	1.17
143	0.00	0.00	0.00
144	2.50	2.49	2.48
145	1.22	1.21	1.21
146	0.00	0.00	0.00
147	2.50	2.49	2.49
148	0.00	0.00	0.00
149	0.54	0.54	0.52
150	1.27	1.27	1.33
151	1.22	1.20	1.14
152	1.26	1.28	1.33
153	1.80	1.75	1.62
154	0.00	0.00	0.00
155	1.24	1.23	1.23
156	1.25	1.25	1.24
157	1.17	1.14	1.09
158	1.16	1.13	1.09
159	1.17	1.14	1.13
160	1.19	1.17	1.15
161	1.22	1.21	1.21
162	2.50	2.49	2.48
163	0.00	0.00	0.00
164	1.22	1.21	1.21
165	1.23	1.22	1.22
166	1.22	1.22	1.22
167	1.22	1.21	1.22
168	1.23	1.22	1.22
169	1.16	1.14	1.08
170	1.16	1.14	1.08
171	1.17	1.14	1.08
172	0.00	0.00	0.00
173	1.99	1.99	1.98
174	1.27	1.26	1.26
175	1.26	1.26	1.25
176	0.53	0.53	0.52
177	0.00	0.00	0.00
178	1.25	1.24	1.24
179	0.00	0.00	0.00
180	1.21	1.21	1.20

MODE / PIN NO.	EE	PB	REC
181	0.00	0.00	0.00
182	0.00	0.00	0.00
183	1.14	1.12	1.15
184	2.49	2.49	2.48
185	1.14	1.11	1.15
186	1.14	1.11	1.18
187	0.00	0.00	0.00
188	1.15	1.11	1.22
189	1.15	1.14	1.13
190	2.49	2.49	2.48
191	1.15	1.20	1.05
192	1.15	1.15	1.12
193	0.00	0.00	0.00
194	1.14	1.05	1.17
195	0.00	0.00	0.00
196	1.14	1.12	1.15
197	2.49	2.49	2.48
198	1.14	1.11	1.15
199	1.14	1.11	1.18
200	0.00	0.00	0.00
201	1.15	1.11	1.22
202	1.15	1.14	1.13
203	2.49	2.49	2.48
204	1.15	1.20	1.05
205	1.15	1.15	1.12
206	0.00	0.00	0.00
207	1.26	1.28	1.33
208	1.80	1.75	1.62
209	0.00	0.00	0.00
210	1.24	1.23	1.23
211	1.25	1.25	1.24
212	1.17	1.14	1.09
213	1.16	1.13	1.09
214	1.17	1.14	1.13
215	1.19	1.17	1.15
216	1.22	1.21	1.21
IC203			
1	2.49	2.49	2.48
2	1.15	1.11	1.15
3	2.49	2.49	2.48
4	1.14	1.14	1.15
5	1.16	1.15	1.22
6	0.00	0.00	0.00
7	1.17	1.11	1.21
8	1.14	1.14	1.14
9	2.49	2.49	2.48
10	1.12	1.11	1.06
11	1.13	1.12	1.14
12	0.00	0.00	0.00
13	1.15	1.10	1.17
14	0.00	0.00	0.00
15	2.49	2.49	2.48
16	1.21	1.20	1.19
17	0.00	0.00	0.00
18	2.49	2.49	2.48

MODE / PIN NO.	EE	PB	REC
19	0.00	0.00	0.00
20	0.54	0.54	0.52
21	1.26	1.27	1.33
22	1.22	1.21	1.15
23	1.26	1.28	1.33
24	1.80	1.75	1.64
25	0.00	0.00	0.00
26	1.23	1.23	1.24
27	1.24	1.25	1.24
28	1.17	1.14	1.08
29	1.16	1.13	1.08
30	1.17	1.14	1.13
31	1.19	1.17	1.15
32	1.22	1.21	1.21
33	2.49	2.49	2.48
34	0.00	0.00	0.00
35	1.22	1.21	1.21
36	1.23	1.22	1.22
37	1.22	1.22	1.22
38	1.22	1.21	1.22
39	1.23	1.22	1.22
40	1.16	1.14	1.08
41	1.16	1.14	1.08
42	1.17	1.14	1.09
43	0.00	0.00	0.00
44	1.99	1.99	1.99
45	1.26	1.26	1.27
46	1.26	1.26	1.26
47	0.53	0.53	0.52
48	0.00	0.00	0.00
49	1.25	1.24	1.24
50	0.00	0.00	0.00
IC204			
1	2.49	2.49	2.48
2	2.49	2.49	2.48
3	2.49	2.49	2.48
4	1.24	1.23	1.23
5	0.00	0.00	0.00
6	0.00	0.00	0.00
7	1.24	1.23	1.23
8	2.49	2.49	2.48
9	2.49	2.49	2.48
10	2.49	2.49	2.48
11	1.24	1.23	1.23
12	0.00	0.00	0.00
13	0.00	0.00	0.00
14	1.24	1.23	1.23
15	1.25	1.24	1.24
16	2.49	2.49	2.48
17	1.24	1.23	1.23
18	0.00	0.00	0.00
19	0.00	0.00	0.00
20	1.24	1.23	1.23
IC301			
1	0.00	0.00	0.00

MODE / PIN NO.	EE	PB	REC
2	0.04	0.04	0.04
3	0.04	0.04	0.04
4	0.00	0.00	0.00
5	0.04	0.04	0.04
6	0.04	0.04	0.04
7	3.35	3.35	3.35
8	0.04	0.04	0.04
9	0.04	0.04	0.04
10	0.00	0.00	0.00
11	0.04	0.04	0.04
12	0.04	0.04	0.04
13	0.04	0.04	0.04
14	0.04	0.04	0.04
15	0.00	0.00	0.00
16	0.04	0.04	0.04
17	3.35	3.35	3.35
18	3.35	3.35	3.35
19	3.35	3.35	3.35
20	0.04	0.04	0.04
21	0.00	0.00	0.00
22	3.35	3.35	3.35
23	0.04	0.04	0.04
24	0.00	0.00	0.00
25	0.00	0.00	0.00
26	0.00	0.00	0.00
27	2.98	3.25	3.30
28	0.00	0.00	0.00
29	0.00	0.00	0.00
30	3.29	3.25	3.11
31	3.35	3.35	3.35
32	0.00	0.00	0.00
33	0.00	0.00	0.00
34	0.00	0.00	0.00
35	0.00	0.00	0.00
36	2.99	2.98	2.99
37	0.00	0.00	0.00
38	0.00	0.00	0.00
39	0.00	0.00	0.00
40	0.00	0.00	0.00
41	0.00	0.00	0.00
42	3.35	3.35	3.35
43	0.00	0.00	0.00
44	0.00	0.00	0.00
45	0.00	0.00	0.00
46	0.00	0.00	0.00
47	0.00	0.00	0.00
48	0.00	0.00	0.00
49	0.00	0.00	0.00
50	0.04	0.04	0.04
51	0.04	0.04	0.04
52	0.00	0.00	0.00
53	0.04	0.04	0.04
54	0.04	0.04	0.04
55	3.35	3.35	3.35
56	0.04	0.04	0.04

MODE / PIN NO.	EE	PB	REC
57	0.04	0.04	0.04
58	0.00	0.00	0.00
59	0.04	0.04	0.04
60	0.04	0.04	0.04
61	0.04	0.04	0.04
62	0.04	0.04	0.04
63	0.00	0.00	0.00
64	0.04	0.04	0.04
65	3.35	3.35	3.35
66	3.35	3.35	3.35
67	3.35	3.35	3.35
68	0.04	0.04	0.04
69	0.00	0.00	0.00
70	3.35	3.35	3.35
71	0.04	0.04	0.04
72	0.00	0.00	0.00
73	0.00	0.00	0.00
74	0.00	0.00	0.00
75	2.98	3.25	3.30
76	0.00	0.00	0.00
77	0.00	0.00	0.00
78	3.29	3.25	3.11
79	3.35	3.35	3.35
80	0.00	0.00	0.00
81	0.00	0.00	0.00
82	0.00	0.00	0.00
83	0.00	0.00	0.00
84	2.99	2.98	2.99
85	0.00	0.00	0.00
86	0.04	0.04	0.04
87	0.04	0.04	0.04
88	0.00	0.00	0.00
89	0.04	0.04	0.04
90	3.35	3.35	3.35
91	3.35	3.35	3.35
92	3.35	3.35	3.35
93	0.04	0.04	0.04
94	0.00	0.00	0.00
95	3.35	3.35	3.35
96	0.04	0.04	0.04
97	0.00	0.00	0.00
98	0.00	0.00	0.00
99	0.00	0.00	0.00
100	2.98	3.25	3.30
101	0.04	0.04	0.04
102	0.04	0.04	0.04
103	0.00	0.00	0.00
104	0.04	0.04	0.04
105	0.04	0.04	0.04
106	0.04	0.04	0.04
107	0.04	0.04	0.04
108	0.00	0.00	0.00
109	0.04	0.04	0.04
110	3.35	3.35	3.35
111	3.35	3.35	3.35

MODE / PIN NO.	EE	PB	REC
112	3.35	3.35	3.35
113	0.04	0.04	0.04
114	0.00	0.00	0.00
115	3.35	3.35	3.35
116	0.04	0.04	0.04
117	0.00	0.00	0.00
118	0.00	0.00	0.00
119	0.00	0.00	0.00
120	2.98	3.25	3.30
121	3.35	3.35	3.35
122	3.35	3.35	3.35
123	3.35	3.35	3.35
124	0.04	0.04	0.04
125	0.00	0.00	0.00
126	3.35	3.35	3.35
127	0.04	0.04	0.04
128	0.00	0.00	0.00
IC302			
1	3.35	3.35	3.35
2	3.35	3.35	3.35
3	2.99	2.99	3.00
4	0.00	0.00	0.00
5	0.00	0.00	0.00
6	3.35	3.35	3.35
7	0.00	0.00	0.00
8	0.00	0.00	0.00
9	3.35	3.35	3.35
10	0.00	0.00	0.00
11	3.35	3.35	3.35
12	0.00	0.00	0.00
13	2.99	2.95	2.99
14	0.00	0.00	0.00
15	0.00	0.00	0.00
16	0.00	0.00	0.00
17	2.99	2.98	2.96
18	0.00	0.00	0.00
19	0.00	0.00	0.00
20	3.35	3.35	3.35
21	3.35	3.35	3.35
22	3.35	3.35	3.35
23	3.35	3.35	3.35
24	3.35	3.35	3.35
25	3.35	3.35	3.35
26	3.35	3.35	3.35
27	3.35	3.35	3.35
28	3.35	3.35	3.35
29	3.35	3.35	3.35
30	3.35	3.35	3.35
31	3.35	3.35	3.35
44	3.35	3.35	3.35
45	3.35	3.35	3.35
46	3.35	3.35	3.35
47	3.35	3.35	3.35
48	3.35	3.35	3.35
49	3.35	3.35	3.35

MODE / PIN NO.	EE	PB	REC
50	3.35	3.35	3.35
51	3.35	3.35	3.35
52	3.35	3.35	3.35
53	3.35	3.35	3.35
54	3.35	3.35	3.35
IC303			
1	3.35	3.35	3.35
2	3.35	3.35	3.35
3	0.00	0.00	0.00
4	0.00	0.00	0.00
5	3.35	3.35	3.35
6	3.35	3.35	3.35
7	0.00	0.00	0.00
8	0.00	0.00	0.00
IC501			
1	5.19	5.19	5.19
2	1.53	1.53	1.53
3	1.52	1.52	1.52
4	0.00	0.00	0.00
5	2.50	2.50	2.50
6	2.34	2.34	2.34
7	0.00	0.00	0.64
8	0.00	0.00	0.64
9	0.00	0.00	0.64
10	0.00	0.00	0.00
11	5.16	5.16	5.16
12	5.08	5.06	5.06
13	5.08	5.08	5.08
14	0.00	0.00	0.47
15	0.00	0.00	0.47
16	0.00	0.00	0.47
17	0.00	0.00	0.47
18	0.00	0.00	0.47
19	5.20	5.20	5.20
20	0.00	0.00	0.00
21	0.00	0.00	0.47
22	5.16	5.16	5.16
23	0.00	0.00	0.00
24	0.00	0.00	0.00
25	0.00	0.00	0.00
26	0.00	0.00	0.00
27	0.00	0.00	0.00
28	0.00	0.00	0.00
29	0.00	0.00	0.00
30	2.85	2.84	2.84
31	2.85	2.84	2.84
32	0.00	0.00	0.00
33	5.20	5.19	5.19
34	4.25	4.24	4.24
35	0.00	0.00	0.00
36	2.86	2.85	2.85
37	0.00	0.00	0.00
38	0.00	0.00	0.00
39	0.00	0.00	0.00
40	2.84	2.84	2.84

MODE / PIN NO.	EE	PB	REC
41	2.85	2.84	2.84
42	2.62	2.62	2.62
43	2.85	2.84	2.84
44	0.00	0.00	0.00
45	5.19	5.19	5.19
46	1.53	1.53	1.53
47	1.52	1.52	1.52
48	0.00	0.00	0.00
49	2.50	2.50	2.50
50	2.34	2.34	2.34
51	0.00	0.00	0.64
52	0.00	0.00	0.64
53	0.00	0.00	0.64
54	0.00	0.00	0.00
55	5.16	5.16	5.16
56	5.08	5.06	5.06
57	5.08	5.08	5.08
58	0.00	0.00	0.47
59	0.00	0.00	0.47
60	0.00	0.00	0.47
61	0.00	0.00	0.47
62	0.00	0.00	0.47
63	5.20	5.20	5.20
64	0.00	0.00	0.00
65	0.00	0.00	0.47
66	5.16	5.16	5.16
67	0.00	0.00	0.00
68	0.00	0.00	0.00
69	0.00	0.00	0.00
70	0.00	0.00	0.00
71	0.00	0.00	0.00
72	0.00	0.00	0.00
73	0.00	0.00	0.00
74	2.85	2.84	2.84
75	2.85	2.84	2.84
76	0.00	0.00	0.00
77	5.20	5.19	5.19
78	4.25	4.24	4.24
79	0.00	0.00	0.00
80	2.86	2.85	2.85
81	0.00	0.00	0.00
82	0.00	0.00	0.00
83	0.00	0.00	0.00
84	2.84	2.84	2.84
85	2.85	2.84	2.84
86	2.62	2.62	2.62
87	2.85	2.84	2.84
88	0.00	0.00	0.00
89	5.19	5.19	5.19
90	1.53	1.53	1.53
91	1.52	1.52	1.52
92	0.00	0.00	0.00
93	2.50	2.50	2.50
94	2.34	2.34	2.34
95	0.00	0.00	0.64

MODE / PIN NO.	EE	PB	REC
96	0.00	0.00	0.64
97	0.00	0.00	0.64
98	0.00	0.00	0.00
99	5.16	5.16	5.16
100	5.08	5.06	5.06
101	5.08	5.08	5.08
102	0.00	0.00	0.47
103	0.00	0.00	0.47
104	0.00	0.00	0.47
105	0.00	0.00	0.47
106	0.00	0.00	0.47
107	5.20	5.20	5.20
108	0.00	0.00	0.00
109	0.00	0.00	0.47
110	5.16	5.16	5.16
111	0.00	0.00	0.00
112	0.00	0.00	0.00
113	0.00	0.00	0.00
114	0.00	0.00	0.00
115	0.00	0.00	0.00
116	0.00	0.00	0.00
117	0.00	0.00	0.00
118	2.85	2.84	2.84
119	2.85	2.84	2.84
120	0.00	0.00	0.00
121	5.20	5.19	5.19
122	4.25	4.24	4.24
123	0.00	0.00	0.00
124	2.86	2.85	2.85
125	0.00	0.00	0.00
126	0.00	0.00	0.00
127	2.84	2.84	2.84
128	2.85	2.84	2.84
129	2.85	2.84	2.84
130	2.62	2.62	2.62
131	2.85	2.84	2.84
132	0.00	0.00	0.00
133	5.19	5.19	5.19
134	1.53	1.53	1.53
135	1.52	1.52	1.52
136	0.00	0.00	0.00
137	2.50	2.50	2.50
138	2.34	2.34	2.34
139	0.00	0.00	0.64
140	0.00	0.00	0.64
141	0.00	0.00	0.64
142	0.00	0.00	0.00
143	5.16	5.16	5.16
144	5.08	5.06	5.06
145	5.08	5.08	5.08
146	0.00	0.00	0.47
147	0.00	0.00	0.47
148	0.00	0.00	0.47
149	0.00	0.00	0.47
150	0.00	0.00	0.47

MODE / PIN NO.	EE	PB	REC
151	5.20	5.20	5.20
152	0.00	0.00	0.00
153	0.00	0.00	0.47
154	5.16	5.16	5.16
155	0.00	0.00	0.00
156	0.00	0.00	0.00
157	0.00	0.00	0.00
158	0.00	0.00	0.00
159	0.00	0.00	0.00
160	0.00	0.00	0.00
161	0.00	0.00	0.00
162	2.85	2.84	2.84
163	2.85	2.84	2.84
164	0.00	0.00	0.00
165	5.20	5.19	5.19
166	4.25	4.24	4.24
167	0.00	0.00	0.00
168	2.86	2.85	2.85
169	0.00	0.00	0.00
170	0.00	0.00	0.00
171	0.00	0.00	0.00
172	2.84	2.84	2.84
173	2.85	2.84	2.84
174	2.62	2.62	2.62
175	2.85	2.84	2.84
176	0.00	0.00	0.00
177	0.00	0.00	0.00
178	2.85	2.84	2.84
179	2.85	2.84	2.84
180	0.00	0.00	0.00
181	5.20	5.19	5.19
182	4.25	4.24	4.24
183	0.00	0.00	0.00
184	2.86	2.85	2.85
185	0.00	0.00	0.00
186	0.00	0.00	0.00
187	0.00	0.00	0.00
188	2.84	2.84	2.84
189	2.85	2.84	2.84
190	0.00	0.00	0.47
191	5.16	5.16	5.16
192	0.00	0.00	0.00
193	0.00	0.00	0.00
194	0.00	0.00	0.00
195	0.00	0.00	0.00
196	0.00	0.00	0.00
197	0.00	0.00	0.00
198	0.00	0.00	0.00
199	2.85	2.84	2.84
200	2.85	2.84	2.84
201	0.00	0.00	0.00
202	5.20	5.19	5.19
203	4.25	4.24	4.24
204	0.00	0.00	0.00
205	2.86	2.85	2.85

MODE / PIN NO.	EE	PB	REC
206	0.00	0.00	0.00
207	0.00	0.00	0.47
208	5.16	5.16	5.16
209	0.00	0.00	0.00
210	0.00	0.00	0.00
211	0.00	0.00	0.00
212	0.00	0.00	0.00
213	0.00	0.00	0.00
214	0.00	0.00	0.00
215	0.00	0.00	0.00
216	2.85	2.84	2.84
217	2.85	2.84	2.84
218	0.00	0.00	0.00
219	5.20	5.19	5.19
220	4.25	4.24	4.24
221	0.00	0.00	0.00
222	2.86	2.85	2.85
223	0.00	0.00	0.00
224	0.00	0.00	0.00
225	0.00	0.00	0.00
226	2.85	2.84	2.84
227	2.85	2.84	2.84
228	0.00	0.00	0.00
229	5.20	5.19	5.19
230	4.25	4.24	4.24
231	0.00	0.00	0.00
232	2.86	2.85	2.85
233	0.00	0.00	0.00
234	0.00	0.00	0.00
235	0.00	0.00	0.00
236	2.84	2.84	2.84
237	2.85	2.84	2.84
238	2.62	2.62	2.62
239	2.85	2.84	2.84
240	0.00	0.00	0.00
241	5.19	5.19	5.19
242	1.53	1.53	1.53
243	1.52	1.52	1.52
244	0.00	0.00	0.00
245	2.50	2.50	2.50
246	2.34	2.34	2.34
247	0.00	0.00	0.64
248	0.00	0.00	0.64
249	0.00	0.00	0.64
250	0.00	0.00	0.00
251	5.16	5.16	5.16
252	5.08	5.06	5.06
253	5.08	5.08	5.08
254	0.00	0.00	0.47
255	2.34	2.34	2.34
256	0.00	0.00	0.64
IC502			
1	0.00	0.00	0.00
2	0.00	0.00	0.00
3	0.00	0.00	0.00

MODE / PIN NO.	EE	PB	REC
4	3.35	3.35	3.35
5	3.35	3.35	3.35
6	0.00	0.00	0.00
7	0.00	0.00	0.00
8	0.00	0.00	0.00
9	0.00	0.00	0.00
10	0.00	0.00	0.00
11	1.84	1.84	1.84
12	1.84	1.84	1.84
13	0.00	0.00	0.00
14	1.84	1.84	1.84
15	0.00	0.00	0.00
16	0.00	0.00	0.00
17	0.00	0.00	0.00
18	0.00	0.00	0.00
19	0.00	0.00	0.00
20	3.35	3.35	3.35
21	3.35	3.35	3.35
22	0.00	0.00	0.00
23	0.60	0.61	0.61
24	0.00	0.00	0.00
25	1.84	1.84	1.83
26	0.00	0.00	0.00
27	0.00	0.00	0.00
28	3.35	3.35	3.35
29	3.35	3.35	3.35
30	3.35	3.35	3.35
31	1.84	1.84	1.84
32	0.00	0.00	0.00
33	0.00	0.00	0.00
34	3.35	3.35	3.35
35	0.00	0.00	0.00
36	0.00	0.00	0.00
37	2.89	2.89	2.89
38	3.35	3.35	3.35
39	0.00	0.00	0.00
40	1.57	1.56	1.56
41	1.84	1.84	1.84
42	0.00	0.00	0.00
43	1.58	1.63	1.64
44	1.29	1.28	1.26
45	1.06	1.05	1.05
46	1.36	1.35	1.30
47	1.78	1.75	1.73
48	3.35	3.35	3.35
49	0.00	0.00	0.00
50	1.58	1.55	1.54
51	1.37	1.37	1.35
52	1.61	1.61	1.61
53	1.61	1.61	1.61
54	1.43	1.43	1.43
55	1.84	1.84	1.84
56	0.00	0.00	0.00
57	1.64	1.69	1.78
58	1.67	1.67	0.89

MODE / PIN NO.	EE	PB	REC
59	1.67	1.67	1.08
60	1.67	1.68	0.58
61	3.34	3.34	3.34
62	0.00	0.00	0.00
63	1.67	1.67	0.93
64	1.67	1.68	1.12
65	1.67	1.68	1.04
66	1.68	1.68	0.95
IC503			
1	1.67	1.67	0.72
2	1.65	1.67	0.68
3	3.31	3.31	3.31
4	0.87	0.86	0.86
5	0.70	0.70	0.70
6	1.84	1.84	1.83
7	0.00	0.00	0.00
8	1.84	1.84	1.83
IC504			
1	0.00	0.00	0.00
2	3.18	3.21	3.22
3	4.77	4.81	4.82
4	0.00	0.00	0.00
5	0.00	0.00	0.00
6	0.00	0.00	0.00
7	0.00	0.00	0.00
8	5.02	5.02	5.02
9	3.35	3.35	3.35
10	0.00	0.00	0.00
11	0.00	0.00	0.00
12	3.18	3.21	3.22
13	4.77	4.81	4.82
14	0.00	0.00	0.00
15	0.00	0.00	0.00
16	0.00	0.00	0.00
17	0.00	0.00	0.00
18	5.02	5.02	5.02
19	3.35	3.35	3.35
20	0.00	0.00	0.00
21	0.00	0.00	0.00
22	0.00	0.00	0.00
23	3.18	3.21	3.22
24	4.77	4.81	4.82
25	0.00	0.00	0.00
26	0.00	0.00	0.00
27	0.00	0.00	0.00
28	0.00	0.00	0.00
29	5.02	5.02	5.02
30	3.35	3.35	3.35
31	0.00	0.00	0.00
32	0.00	0.00	0.00
33	3.18	3.21	3.22
34	4.77	4.81	4.82
35	0.00	0.00	0.00
36	0.00	0.00	0.00
37	0.00	0.00	0.00

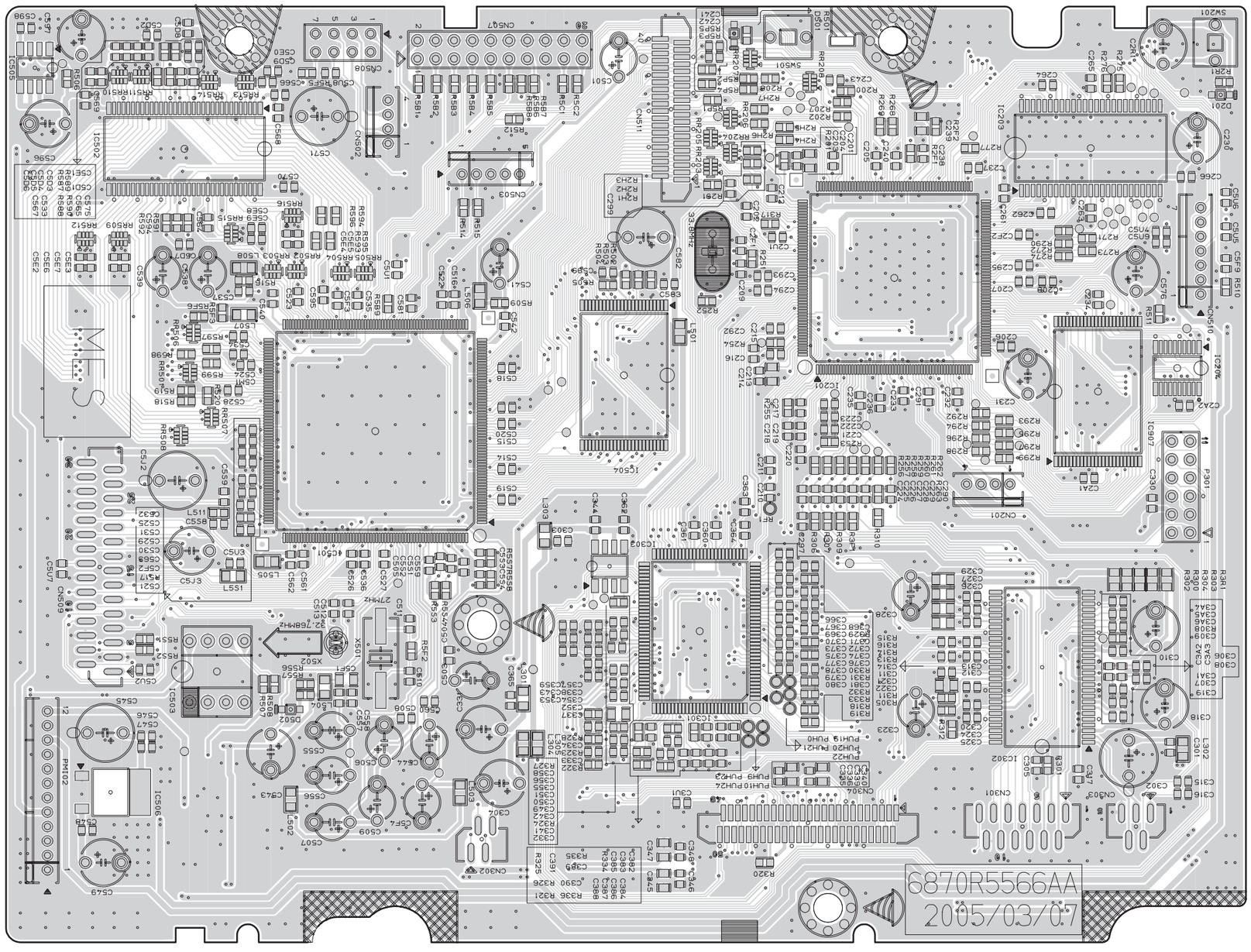
MODE / PIN NO.	EE	PB	REC
38	0.00	0.00	0.00
39	5.02	5.02	5.02
40	3.35	3.35	3.35
41	0.00	0.00	0.00
42	0.00	0.00	0.00
43	0.00	0.00	0.00
44	0.00	0.00	0.00
45	5.02	5.02	5.02
46	0.00	0.00	0.00
47	0.00	0.00	0.00
48	5.02	5.02	5.02
IC505			
1	0.00	0.00	0.00
2	3.35	3.35	3.35
3	3.35	3.35	3.35
4	0.00	0.00	0.00
5	3.35	3.35	3.35
6	3.35	3.35	3.35
7	0.00	0.00	0.00
8	3.35	3.35	3.35
IC506			
1	1.62	1.62	1.62
2	0.00	0.00	0.00
3	0.00	0.00	0.00
IC701			
1	0.63	0.87	0.92
2	0.00	0.00	0.00
3	0.00	0.00	0.00
4	4.82	4.82	4.82
5	4.89	4.84	4.88
6	0.00	0.00	0.00
7	0.00	0.00	0.00
8	5.16	5.16	5.16
9	0.00	0.00	0.00
10	0.00	0.00	0.00
11	5.17	5.16	5.16
12	0.00	0.00	0.00
13	5.17	5.16	5.16
14	4.77	4.94	4.82
15	0.00	0.00	0.00
16	0.00	0.00	0.00
17	5.06	5.04	5.17
18	5.04	5.02	5.22
19	5.11	5.11	4.83
20	0.00	0.00	0.00
21	0.00	0.00	0.00
22	0.00	0.00	0.00
23	0.00	0.00	0.00
24	0.00	0.00	0.00
25	5.17	5.17	5.17
26	0.00	0.00	0.00
27	0.00	0.00	0.00
28	4.63	4.63	4.63
30	0.00	0.00	0.00
31	0.00	0.00	0.00

MODE / PIN NO.	EE	PB	REC
32	0.00	0.00	0.00
33	0.66	0.72	0.68
34	0.67	0.71	0.66
35	0.00	0.00	0.00
36	5.17	5.17	5.17
37	2.56	2.52	2.55
38	2.35	2.55	2.43
39	0.00	0.00	0.00
40	2.03	2.04	2.01
41	2.54	2.52	2.52
42	0.00	0.00	0.00
43	3.58	3.42	3.58
44	4.90	4.90	4.90
IC706			
1	5.19	5.19	5.19
2	1.53	1.53	1.53
3	1.52	1.52	1.52
4	0.00	0.00	0.00
5	2.50	2.50	2.50
6	2.34	2.34	2.34
7	0.00	0.00	0.64
8	0.00	0.00	0.64
IC708			
1	0.00	0.00	0.64
2	0.00	0.00	0.00
3	5.16	5.16	5.16
4	5.08	5.06	5.06
5	5.08	5.08	5.08
6	0.00	0.00	0.47
7	0.00	0.00	0.47
8	0.00	0.00	0.47
9	0.00	0.00	0.47
10	0.00	0.00	0.47
11	5.20	5.20	5.20
12	0.00	0.00	0.00
13	0.00	0.00	0.47
14	5.16	5.16	5.16
15	0.00	0.00	0.00
16	0.00	0.00	0.00
IC709			
1	3.36	3.36	3.36
2	1.74	1.75	1.75
3	3.36	3.36	3.36
4	1.26	1.26	1.26
5	0.00	0.00	0.00
6	5.12	5.12	5.12
7	1.69	1.69	1.69
8	1.68	1.68	1.68
9	3.36	3.35	3.35
10	2.57	2.57	2.57
11	2.59	2.59	2.59
12	2.57	2.57	2.57
13	5.19	5.19	5.19
14	0.00	0.00	0.00
15	5.12	5.14	5.14

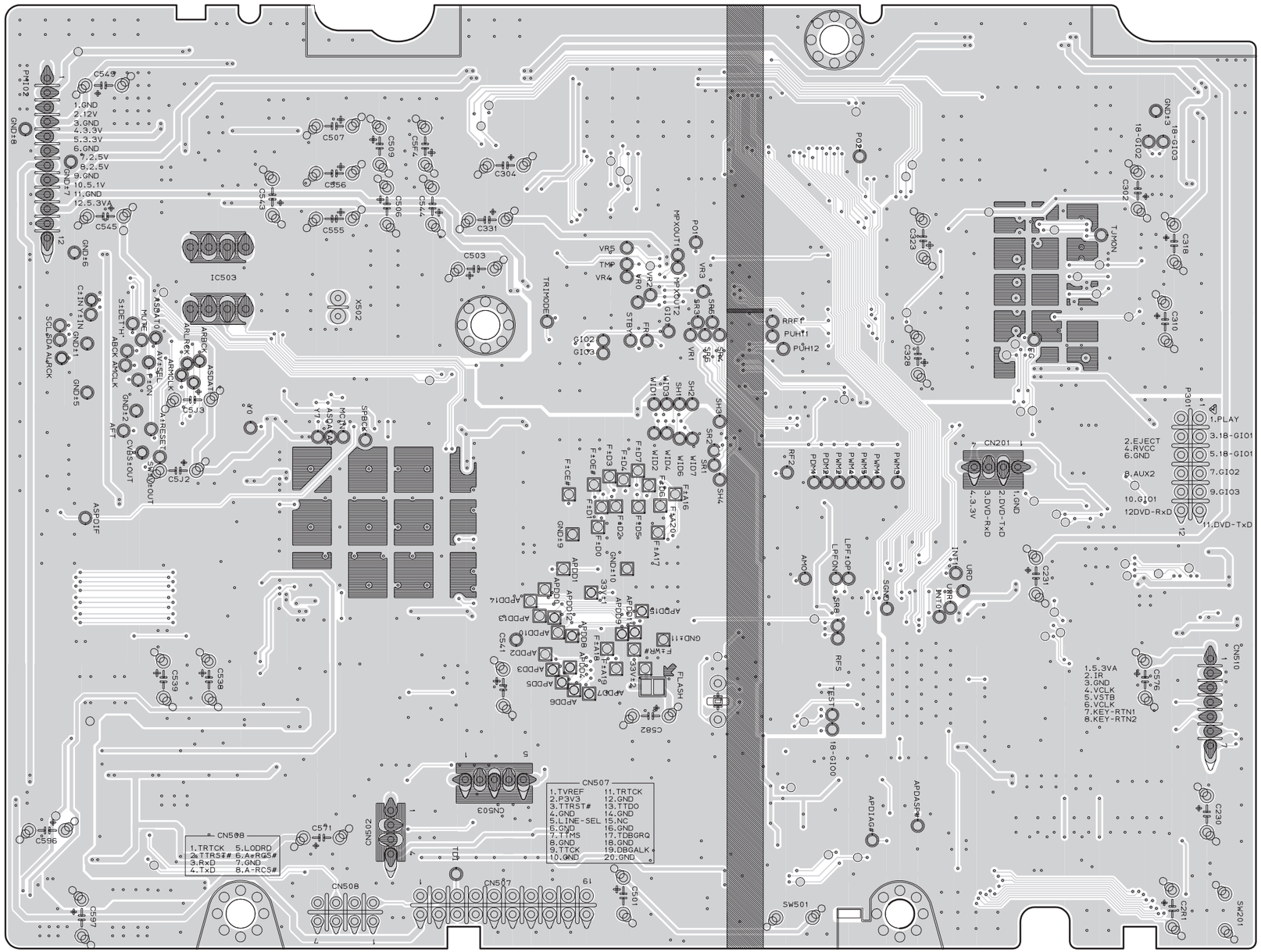
MODE / PIN NO.	EE	PB	REC
16	3.36	3.36	3.36
17	1.69	1.69	1.69
18	1.68	1.68	1.68
19	3.36	3.35	3.35
20	2.57	2.57	2.57
21	2.59	2.59	2.59
22	2.57	2.57	2.57
23	5.19	5.19	5.19
24	3.36	3.36	3.36
25	1.26	1.26	1.26
26	0.00	0.00	0.00
27	5.12	5.12	5.12
28	1.69	1.69	1.69
29	1.68	1.68	1.68
30	3.36	3.35	3.35
31	2.57	2.57	2.57
32	2.59	2.59	2.59
33	2.57	2.57	2.57
34	5.19	5.19	5.19
IC714			
1	1.68	1.68	1.68
2	1.70	1.69	1.69
3	1.68	1.68	1.68
4	1.74	1.75	1.75
5	3.27	3.27	3.27
6	0.00	0.00	0.00
7	3.35	3.35	3.35
8	3.35	3.35	3.35
9	3.36	3.36	3.36
10	3.35	3.35	3.35
11	3.35	3.35	3.35
12	1.34	1.34	1.34
13	4.11	4.11	4.12
14	12.08	12.07	12.07
15	4.19	4.19	4.20
16	0.00	0.00	0.00
IC716			
1	0.00	0.00	0.00
2	5.12	5.12	5.12
3	1.69	1.69	1.69
4	1.68	1.68	1.68
5	3.36	3.35	3.35
6	2.57	2.57	2.57
7	2.59	2.59	2.59
8	2.57	2.57	2.57
Q701			
E	1.32	1.32	1.32
B	0.64	0.65	0.64
C	0.00	0.00	0.00
Q702			
E	0.00	0.00	0.00
B	0.64	0.65	0.64
C	0.00	0.00	0.00
Q703			
E	5.18	5.19	5.18

PRINTED CIRCUIT DIAGRAMS

1. MAIN P.C.BOARD(TOP SIDE)

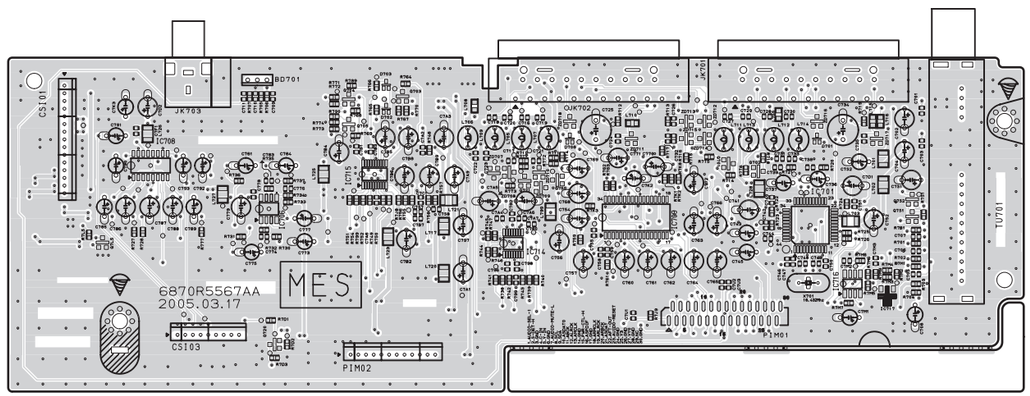


2. MAIN P.C.BOARD(BOTTOM SIDE)

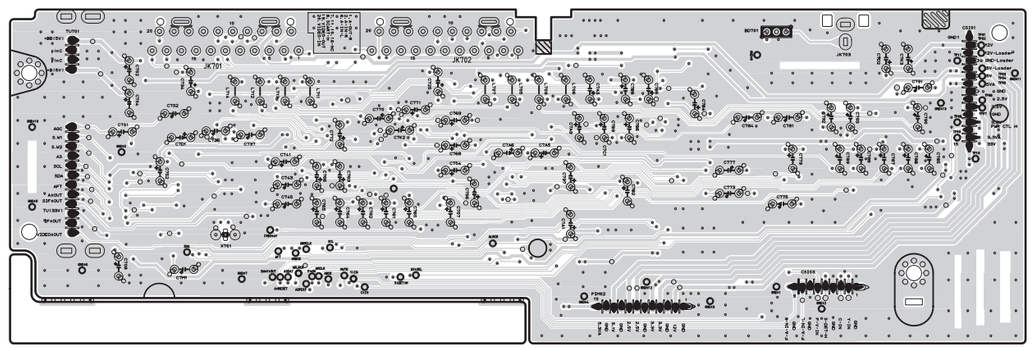


3. I/O P.C.BOARD

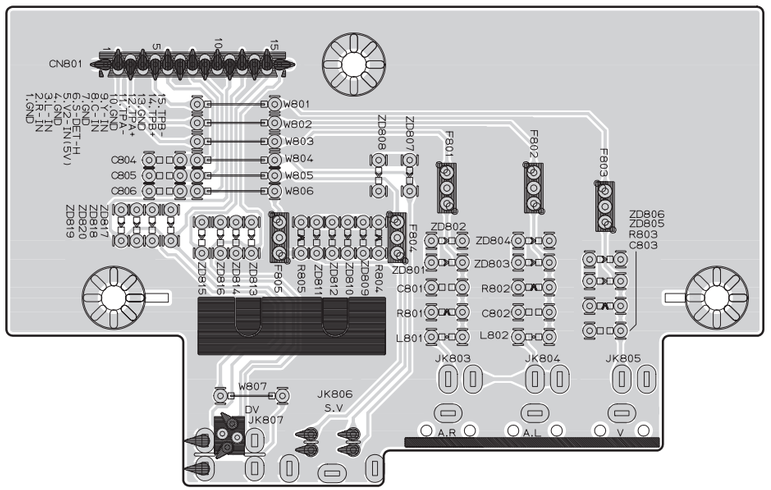
(TOP SIDE)



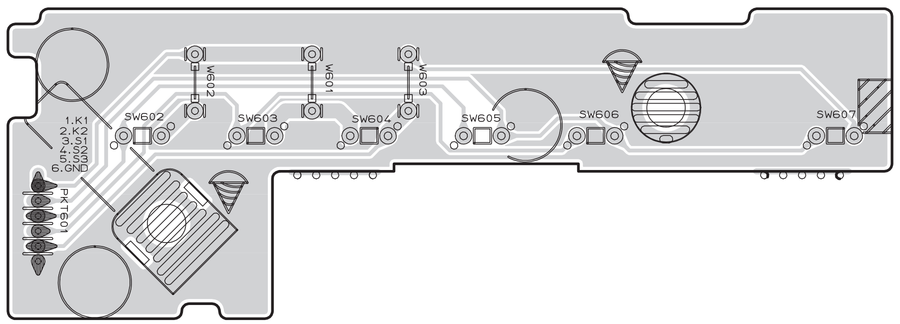
(BOTTOM SIDE)



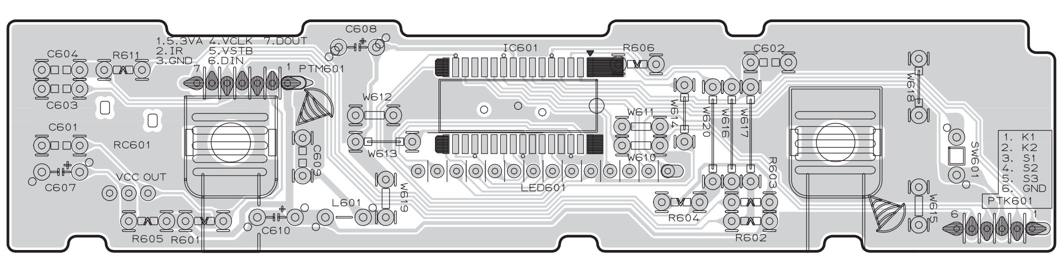
4. JACK P.C.BOARD



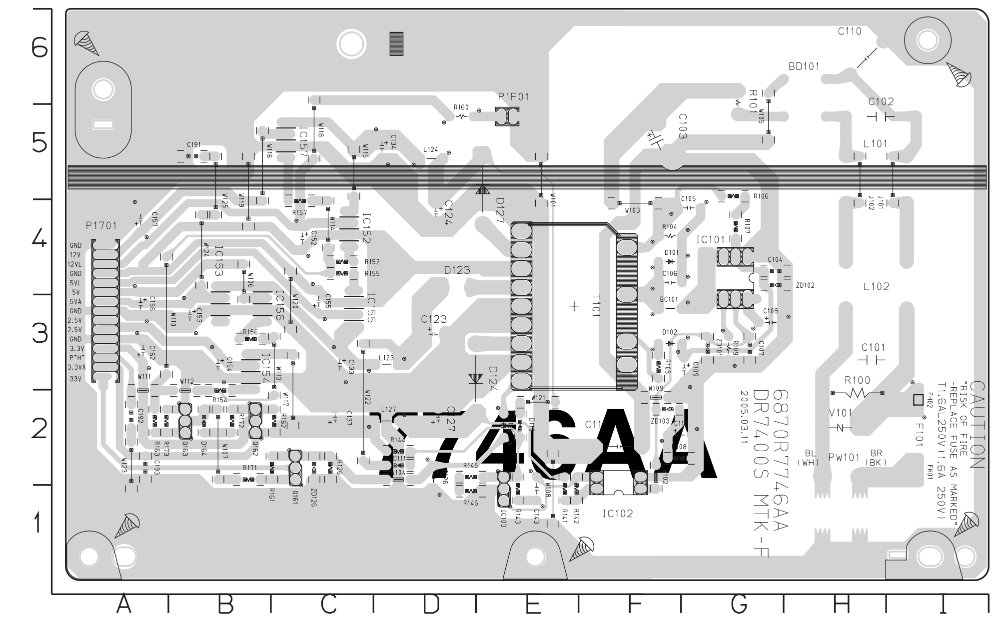
5. KEY P.C.BOARD



6. FRONT P.C.BOARD



8. POWER P.C.BOARD



LOCATION GUIDE

BC101	F3	D102	F3	R101	G6
BD101	H6	D110	E2	R104	F4
C101	H3	D111	D2	R105	F3
C102	H5	D123	D4	R106	G5
C103	F5	D124	D3	R107	G4
C104	G4	D126	E2	R108	F2
C105	G4	D127	E5	R109	G3
C106	F4	D164	B2	R126	C2
C107	G3	FH01	I2	R141	E1
C108	G3	FH02	I2	R142	E1
C109	G3	IC101	G3	R143	E1
C110	H6	IC102	F1	R144	D2
C111	F2	IC103	E1	R145	D2
C112	F2	IC152	C4	R146	D1
C123	D3	IC153	B3	R152	C4
C124	D4	IC154	B3	R154	B2
C126	D2	IC155	C3	R155	C4
C127	D2	IC156	B3	R156	B3
C133	C3	IC157	C5	R157	C4
C134	D5	J101	I5	R160	D5
C137	C2	J102	H5	R161	C2
C143	E1	L101	H5	R162	C2
C152	C4	L102	H4	R163	A2
C153	B3	L123	D3	R171	B2
C154	B3	L124	D5	R172	B2
C155	C3	L127	D2	R173	A2
C156	A3	P1701	A4	T101	E3
C157	A4	P1F01	E5	V101	H2
C162	A3	PW101	H2	ZD101	G3
C191	B5	Q161	C2	ZD102	G4
C192	A2	Q162	B2	ZD103	F2
C193	A2	Q163	B2	ZD126	C2
D101	F4	R100	H2		